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NUMBER 3

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THE NATIONAL ASSOCIATION

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Bulletin of the National Association of Nurse Anesthetists

VOLUME 4 NO. 3 AUGUST 1936

INDEX

PAGE

Fourth Annual Meeting 129

Anesthesia and the Orthopedic Surgeon, A. M. Rechtman, M.D., F.A.C.S., and E. A. Brav, M.D. 131

The Nurse as an Anesthetist, Irvin D. Metzger, M.D. 135

Anesthesia in Thoracic Surgery, Martha Ziegler 138

Anesthesia in Bone Surgery in Children, John A. Heberling, M.D. 140

Anesthesia in Neurological Surgery, Ida M. Edwards 142

Right of Nurse Anesthetist to Administer Anesthetics 146

Care of the Patient Anesthetized, By spinal method, Orville C. King, M.D. 147

Pennsylvania Association of Nurses 151

New York Elects Officers for 1936 153

First Annual Meeting of Missouri Association 154

Tennessee Affiliates with the National Association 155

Activities of the Oregon Anesthetists 155

Members of National Association of Nurse Anesthetists 156

Mississippi Organization Meeting 176

Index to Advertisers:

- Puritan Compressed Gas Corporation .... Inside Front Cover
- The Heidbrink Company 177
- E. R. Squibbs & Sons 127
- Mallinckrodt 178
- Cheney Chemical Company .... Inside back cover
- Ohio Chemical & Manufacturing Company .... Outside back cover

FOURTH ANNUAL MEETING

OF THE

NATIONAL ASSOCIATION OF NURSE ANESTHETISTS

WILL BE HELD IN CONJUNCTION WITH THE AMERICAN HOSPITAL ASSOCIATION

SEPTEMBER 29th and 30th and OCTOBER 1st, 1936

CLEVELAND, OHIO

Convention headquarters, Carter Hotel, Prospect Avenue near East Ninth Street. The Carter Hotel is within a few blocks of the convention auditorium in the Cleveland Public Hall. A special taxicab rate of 20 cents (one or more passengers) between the hotel and the auditorium has been granted.

All rooms at the Carter Hotel will be reserved for our group until one week prior to the meeting. *Make reservations early, using the enclosed card.*

The program for the meeting will include such speakers as George W. Crile, M.D., Howard T. Karsner, M.D., and J. L. Reycraft, M.D. The anesthetists' banquet will be held Tuesday evening, September 29th, at the Carter Hotel. Daniel P. Quiring, Ph.D., who accompanied Dr. Crile on a recent trip to Africa, will be the speaker of the evening.

A clinic on heart surgery will be conducted by Claude Beck, M.D., at the University Hospitals. Visitors will be welcome at all hospitals in Cleveland.

Cleveland as your convention city offers many added attractions to make the trip especially worth while. The Great Lakes Exposition, which opened June 27th and continues for one hundred days, until October 4th, is a $25,000,000 show, expected to draw 4,000,000 visitors. A magnificent horticultural building will remain as a permanent exhibit after the exposition closes. A "Street of the World" will contain buildings, food, *et cetera*, representative of all nationalities. The Globe Theatre will present condensed versions of Shakespearean plays in a building modelled after the Globe Theater in England in which these plays were originally shown. One of Cleveland's largest department stores will conduct a complete fashion show daily.

It is with great pleasure that the trustees and administration of Lakeside Hospital welcome the members of the National Association of Nurse Anesthetists to Cleveland at the time of their annual meeting in September.

It is a source of great pride and gratification to recall that the first School of Anesthesia with definite educational requirements and an outlined course of study was started at Lakeside Hospital in 1912 and that later on, under the splendid leadership of Miss Agatha Hodgins, then Director of the School of Anesthesia at Lakeside Hospital, there was organized the National Association of Nurse Anesthetists.

We congratulate you upon your past record of achievement and have every confidence in the future growth and development of your association.

R. H. Bishop, jr., M.D.,
Director, The University
Hospitals of Cleveland

ANESTHESIA AND THE ORTHOPEDIC SURGEON*

A. M. RECHTMAN, M.D., F.A.C.S. and E. A. BRAV, M.D.

The practice of the orthopedic surgeon has definite and often distinct problems relating to the anesthetist and teamwork is the keynote essential for the best results possible in the operating room. The properly trained nurse anesthetist working in understanding cooperation with the surgeon contributes to what constitutes an ideal team.

The welfare of the patient is paramount in the minds of those entrusted with his care. The responsibility of the surgeon in the operating room includes not alone his own surgical judgment and skill, but also all accessory factors incidental to the preparation and completion of the surgical procedure. The maintenance of rigid asepsis; the efficiency of the surgical personnel; the choice and proper administration of the anesthetic must all be directly or indirectly supervised by the surgeon. But the ability, understanding and cooperation of the anesthetist are of prime importance and are essential to the success of the operation. The anesthetist's nursing training permits of a ready recognition of the patient's condition and reaction and it is to the patient and her job, rather than to the technique of the operation to which she directs her interest.

An operation is usually an ordeal to the patient, which must not be forgotten by the surgeon or the anesthetist in the routine of their duties. The surgeon and the anesthetist should remember the patient's apprehension concerning the contemplated procedure. The familiar "Doctor, please don't operate until I am asleep!" and "How will you know when I am asleep?" indicate the patient's thoughts. This apprehension, together with the unfamiliarity of the anesthetist's voice, however gentle, and the subsequently firm application of a mask over the face, suggest reasons why the desired pre-anesthetic relaxation is all too rarely obtained. Preoperative sedation is of course helpful and practically indispensable, but it is usually not sufficient. Personal contact of the anesthetist and the patient, perhaps on the day preceding the operation, may dispel many of the patient's doubts and instill confidence and react favorably to the patient's welfare.

The atmosphere in the operating suite should be dignified but without the disturbing note which solemnity lends. Noises should be rigidly avoided. Conversation may be annoying to the patient being anesthetized and may prevent relaxation. A few words in greeting by the anesthetist and some explanation of the procedure are advisable. A separate anesthesia room is preferable. If the patient is taken to the operating room before being anesthetized, unnecessary noise and conversation should be avoided. The surgeon should refrain from discussing the case or his contemplated surgical procedure until the patient is asleep. While it may be proper to prepare a patient before the anesthetic is started, preparation after the induction period should not continue until the patient is well under the influence of the anesthetic as the procedure may add to the patient's fear, accentuate the exciting stage and delay relaxation. These are all too frequent errors of judgment and they are incompatible with the optimum sought in anesthesia and surgery.

In every surgical procedure there is

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* From the Orthopedic Service at the Jewish Hospital, Philadelphia, Pa.

a certain degree of tension due perhaps to the responsibility entailed in the preservation of life. This may be lessened by the cooperative efficiency of the operating team and the efficiency of the anesthetist is here of paramount importance. The anesthetist should understand not only the actual technique of administering the anesthetic but also the surgical procedure which is to be performed; the surgeon's requirements as regards anesthesia, and the eccentricities of the surgeon. Where anesthetists are assigned to a definite service, or work with a small group of men practicing a surgical specialty, this understanding may be acquired and developed to an advanced degree. If the surgeon is given the most advantageous conditions in which to work, with no fault to be found with the medical or nursing assistance and the anesthetic administered entirely to his approval, his efforts may be directed to the surgical procedure exclusively and the welfare of the patient will be distinctly benefited. The surgeon's confidence in the ability of the anesthetist will obviate unnecessary delay and may prevent harmful prolongation of the anesthesia. In an institution where many surgeons are working in different fields and especially where the training of student anesthetists necessitates a rapid change of personnel, this mutual understanding is more difficult to obtain, but it should always be sought.

A large part of the practice of orthopedic surgery comprises work on bone, and to this anesthesia is of important relation. Extensive procedures on bony tissue are invariably shocking to the patient and in orthopedic surgery the anesthetist must be prepared to aid in minimizing shocking stimuli. The understanding anesthetist, therefore, will keep the patient sufficiently relaxed while the exposure is made but will induce profound anethesia while work is being done on the bone. The dislocation of large joints, as in reconstructive surgery; the handling of large nerves or the inevitable stretching of tissue, either because of a small incision or the obtaining of exposure in deeply placed lesions, all require more profound anesthesia to reduce surgical shock. This necessitates a knowledge of the actual steps of the surgical procedure on the part of the anesthetist and an appreciation of the value of the relative depths of the narcosis which are indicated. Since many orthopedic procedures are time-consuming, it is the duty of the anesthetist to maintain sufficient depth of anesthesia to be effective until the operation has been completed, the plaster applied and the patient returned to bed, with a minimal period of post-operative narcosis. Such ability requires not only experience in the technique of anesthesia but sound judgment and a good working knowledge of the operative procedure, its constitutional effects and the average time for its completion. Such knowledge results in advantages to the surgeon's efficiency and to the patient's welfare which are self-evident, and suggest the necessity for anesthetist-surgeon cooperation.

While the anesthetist, by alert watchfulness, may be an invaluable aid in the prevention of surgical shock, the surgeon must do his part to minimize the dangers of the operation. The technique of the surgeon will influence the degree of shock which the patient sustains. Unnecessary pounding of bone, especially over the spinal cord; the use of dull bone-cutting instruments; the undue pulling and traumatizing of soft tissues; unnecessary roughness in the handling of large joints; too extensive operations, especially in children, are all factors causing surgical shock. In saucerization for chronic osteomyelitis the use of an electrically driven burr or drill instead of a chisel and mallet has been shown to be less shocking to the patient. In the Hibbs type of spinal fusion, gentle traction on the soft tissues and the manual use of a sharp gouge to elevate bone chips from the laminae rather than using a mallet, will minimize the shock which may be transmitted to the spinal cord. If a small incision necessitates undue trauma to soft tissues in obtaining exposure, enlarging the incision is a commendable procedure and may prevent shock. If all surgeons learned the principle always practiced and frequently quoted by Doctor Samuel Kleinberg of New York, i. e., ". . . . handle tissues lovingly," there would be fewer instances of shock, the result of surgical trauma. It is preferable to spend a little longer time in performing the operation in order to avoid rough handling of tissues. Conservation of time by avoidance of useless motions is to be commended. An unusually long procedure, however gentle, is shocking in itself. Dividing such extensive procedures into two or more stages is more logical and conservative than risking the safety of the patient. Another important consideration in dealing with the orthopedic patients is that many of them, either because of constitutional inferiority or prolonged pre-operative invalidism, are not good operative risks for extensive procedures. This fact must temper the surgeon's enthusiasm and must be remembered by the anesthetist if the patient's best welfare is to be served.

The choice of the anesthetic must depend upon the individual requirements of each case and generalization in favoring any one type of anesthetic is a mistake. The important considerations when deciding upon the most favorable anesthetic are the general condition of the patient, age, the type of surgical procedure and the estimated time for its completion. The nervous stability of the patient and his attitude towards the impending operation are also matters to be considered in the proper choice of an anesthetic. The anesthetist should learn the amount of relaxation each surgeon desires for a particular procedure. Without attempting a detailed account of the various anesthetics used on the orthopedic service at the Jewish Hospital in Philadelphia, certain observations and generalizations may be made nevertheless.

Ether is the safest and probably the most satisfactory anesthetic. It is indicated in extensive procedures or where profound relaxation is necessary. Its stimulating effect is of value in questionable cardiac cases, but it should be avoided in patients with respiratory conditions. Preliminary induction by nitrous oxide and oxygen is advisable in most cases. To excite a nervous or weakened patient by immediate ether inhalation is to defeat the purpose of a careful choice of anesthetic.

Nitrous oxide and oxygen anesthesia is most agreeable to the patient and is very satisfactory in comparatively brief procedures requiring only moderate relaxation, and can be augmented in case of necessity by ether. It is probably the anesthetic of choice in the majority of soft tissue operations.

Spinal anesthesia is limited in application but where indicated it is highly efficient. In procedures involving areas below the level of the first lumbar vertebra it provides complete relaxation and decreases hemorrhage. It is contraindicated in shocked or weakened individuals but may be the anesthetic of choice where hypertension is encountered. This anesthetic must be watched closely and the anesthetist must be prepared for the emergencies which may attend its use. Apprehensive patients do not react well to spinal anesthesia and often express the desire to be "asleep" during the surgical procedure. In children there is less apprehension. The reactions were most favorable in children on whom spinal anesthesia was used in a group of operations on the service of the senior author at the Atlantic City Hospital and the Betty Bacharach Home.

Avertin, from the patient's standpoint, is probably the perfect anesthetic. It is often satisfactory in the most extensive procedures. It may be supplemented by nitrous oxide and oxygen, or ether, in surprisingly small quantities to maintain relaxation. In cases where the application of a body plaster may be more time-consuming than the operation itself, the light, residual anesthesia provided by avertin eliminates the necessity of a prolonged gas or ether anesthesia. In procedures of the head and neck, such as the operation for torticollis, the elimination of the mask is of real value in facilitating the operative technique and in the application of a plaster dressing. Avertin once administered, however, is beyond control. The dosage may be difficult to estimate because of the variability of surgical procedures, so that the necessity for supplementary anesthesia or prolonging the anesthesia may be encountered. In some cases, however, maintenance of light narcosis for several hours after the operation has been completed is desirable. Avertin is perhaps most safely used as a basal anesthetic.

Local and regional anesthesia using 1 per cent or 2 per cent novocaine solutions have distinct advantages in selected cases. Local anesthesia for brief, superficial procedures is usually satisfactory. In the reduction of fractures its use is rapidly increasing and provides the definite advantage of repeated reductions and roentgen ray studies without additional anesthesia. Regional anesthesia is also of use in fracture work. It provides more prolonged anesthesia and greater relaxation in an extremity, so that more difficult procedures may be performed. Both local and regional anesthesia avoid whatever danger, however slight, of other forms of anesthesia and the possibility of harmful effects is remote.

Intratracheal gas and ether anesthesia is excellent in operations on the head and neck; also where the necessity for having the patient in the prone position may create respiratory difficulties if inhalation anesthesia is used. Its administration, however, requires special technique, making it available at comparatively few institutions.

When the safety and efficiency of intravenous evipal or similar preparations have been demonstrated, they may be useful additions to orthopedic anesthesia for brief procedures such as manipulations, the reduction of certain fractures, dislocations, painful dressings, tenotomies and the simple drainage of bone or soft tissue infections.

This brief outline may be helpful in emphasizing some of the important, special requirements in the anesthesia of orthopedic patients. Some general suggestions have been made pertaining to the relationship of the anesthetist to the patient and to the surgeon. The prime consideration, however, is the cooperation of every component of the surgical team as essential to the patient's welfare.

THE NURSE AS AN ANESTHETIST*

IRVIN D. METZGER, M.D.
Chairman, State Board of Medical Education and Licensure
Harrisburg, Penna.

The administration of anesthetics concerns the physical welfare of human beings and therefore may be done legally only by a person who is licensed to practice medicine in the state. Any attempt to perform this function must be done with the assurance that the responsibility is borne by a licensed physician. These pronouncements are in accordance with interpretations of law as defined by the courts of this Commonwealth. The question of the ability of the anesthestist to perform the work skillfully and safely does not primarily affect the decision. The legal requirement for driving a motor vehicle within the state consists of a license so to do. The absence of a certification of such right, when called into question, involves the operator in a legal difficulty which cannot be mitigated by attempting to prove how skillful a driver he or she may be. The matter of having complied with the law alone is considered. A similar situation faces the one who enters into such a serious business as that of the administration of any anesthetic. How, then, may a nurse who is not licensed be justified in his or her action?

This question has been raised many times by physicians in this and other states in an effort to limit the administration of anesthetics to qualified physicians. Legal proceedings to restrain nurses from performing these clinical activities, or prosecutions for having done so, have been waged in the courts of the various jurisdictions. In this state and most of the others in the Union, the verdicts have been favorable to the nurse anesthetist provided certain rules and regulations have been followed under which the activities could be declared justifiable.

What, then, are these rules and regulations? The right to practice any form of the healing art involves an individual responsibility on the part of the licensee for the welfare of the patient. This cannot be assumed by a corporation, an institution such as a hospital, nor by a group of persons even though each may be licensed to assume the responsibility individually; it must be placed specifically on one person. Any legal recourse following some untoward effect must be directed to the one responsible individual. This applies to institutional activities as much as to private practice. Therefore, the responsibility for the welfare of the patient in any clinical procedure which accompanies the administration of an anesthetic rests upon the qualified physician who instigates the administration of the anesthetic and performs the operation. He or she who assists in the process either with the cone or the knife does so under his assumption of all responsibility for his own part and for that of his assistants. This applies even though his anesthetist may also be a licensed physician. Herein rests the legal justification for the employment of an unlicensed anesthetist. Obviously, no physician is willing to assume the responsibility for the welfare and, potentially, for the life of a patient without assuring himself that his anesthetist-assistant as selected proffers the best prospect for safety in each particular case. Just as he rightfully selects the anesthetic most suitable to each patient, so he should be and legally is privileged to select the most suitable person to administer the same.

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*Read at the fifth annual meeting of the Pennsylvania Association of Nurse Anesthetists, held in Pittsburgh, Pa., April 23rd, 1936.

The administration of anesthetics by nurses is a relatively recent custom. Even in the last generation such procedure would have been considered entirely unjustifiable. How, then, has this innovation in medical practice gained such a firm foothold? Briefly, it developed from dire necessity; the inefficiency of medical practitioners in this special field caused surgeons in the larger clinics of the country to demand the development of experts in this line, for their own protection, and that of their patients. The infrequent occasions for the administration of anesthetics by physicians caused them to be inapt even though well trained theoretically in its technique. The remuneration for the same, except in rare situations, was insufficient to encourage a physician to devote his entire time and exclusive attention to the work, such as skill in the same requires. Furthermore, it became evident, ere long experimentation, that the temperament of a woman who might be enamored by this kind of work was more suitable to its peculiar needs than that of a man; also, that her interest is more apt to be centered on her part of the care of the patient than on the entire care as is apt to be the concern of a physician-anesthetist. Some surgeons claim also that the motherly instinct of a woman exerts peculiar soothing charms over patients and makes them more amenable to drug effect. The wisdom of this assertion, I suspect, is open to question in some cases. Under all considerations, the consensus among recognized surgeons of this country is that with adequate training women are preferred to men in the administration of anesthetics. This general recognition has made it difficult in our day to secure in young physicians even a tolerable efficiency in the knowledge and technique of anesthesia.

About twenty years ago, the State Board of Medical Education and Licensure of Pennsylvania, in a general inspection of all the hospitals that received State aid, found many in the more rural districts that were sorely distressed because of the frequent accidents that arose from the administration of anesthetics. Critical inquiry revealed that in many cases the surgeon was compelled to accept the proffered services of the family physician as administrator of the anesthetic. Under the guise of having the confidence of his patient, he thus became a part of the operative force and received an ample part of the fees accruing therefrom. Surgeons and hospital authorities fully sensed the unwholesome situation but could not easily extricate themselves from it. Since this was a common practice, attempts to break therefrom meant serious loss of patronage alike to surgeon and hospital. The Board therefore sent forth a more or less arbitrary requirement of each hospital that secured state appropriation, to have available to the institution at all hours the services of an adequately trained anesthetist. Having been empowered by legislation to authorize withholding of the appropriation if its requests were not allowed, the Board had little difficulty in securing results. Thus, the nurse anesthetist policy in our state has the approval of the Board, brought about by the needs of the situation. Since an adequate number of trained physicians was lacking, the development of a corps of nurse anesthetists became inevitable.

Being in accord with the medical trends of the time, and having proved its value in practice for years, there arose little protest against this regime either from profession or laity.

During the depression, when many physicians found practice less remunerative, efforts were made to restore to themselves this, as they said, important field of medical practice. Reasonable as such efforts would seem to be, a little reflection will convince the most ardent advocate of the impracticability of the same. Such legal requirement would open every hospital of the state to hazardous procedures. It also would expose every surgeon to the temptation of unethical practice. Furthermore, the situation in medical practice is such as to make doubtful the development of adequately trained, highly skilled physicians in sufficient number to meet the needs of the state. The exalted fees which such an expert would command would cause a revolt by profession and laity alike, and would frustrate the whole plan. A well-working system of practice must not be replaced by such a doubtful one.

Why is this branch of medical practice handed over to the nurse anesthetist when others are so critically guarded? Briefly, because the administration of anesthetics is essentially an art while other branches of medicine are largely a science. Art is acquired by experience, science by the acquisition of knowledge. The technique in anesthesia, as in any subject, is learned scientifically but is applied artistically. A knowledge of the technique is necessary, but its knowledge does not assure skillful administration. The artist has technique, but more. He or she uses the technique to insert his or her personality in the application of the same. A maximum of science with a minimum of art would make a poor anesthetist; a minimum of science with a maximum of art might make a good anesthetist; a maximum of both, of course, makes the best anesthetist.

Teaching anesthesia in the course of intern training places upon hospitals of the state and their representatives in this department a special obligation. Medical schools teach the theory of anesthesia from the pharmacological, physiological and pathological viewpoints. They give demonstrations and require some experience in its administration. Every physician must know this subject theoretically and practically in order to qualify for licensure. He should be sufficiently trained in the art of its administration to assure safety to patients under his application. The state expects its hospitals that are approved for intern training to assure this before they certify to the adequacy of each intern's training. Fidelity to this obligation must be insisted upon in each case.

For the purpose of securing a thorough training in the administration of anesthetics each hospital shall have some suitable physician to head the department of anesthesia. It is his duty to see that the schedule provides specific time and opportunity for this training. It must not be a casual service, and therefore neglectible, but at some time during the year must be the featured service for each intern. The chief shall see that this is carefully followed. He should also review the principles involved and secure faithful care and critical guidance in the practical application of the same. If the oversight is left to nurse anesthetists, it should be performed with confidence and conscientious fidelity. The preponderance of knowledge which the novice in medicine is apt to display must not intimidate her in her efforts to direct his uncertain steps. Great artists have little to fear in the presence of pompous scientists.

Anesthesia has proved to be one of the greatest of the many boons which medicine has brought to humanity. As guardians of this gift, may it ever in your hands prove to be a blessing; may it never evade your mastery and become a curse to any trustful human being.

ANESTHESIA IN THORACIC SURGERY*

MARTHA ZIEGLER

Kings County Hospital, Brooklyn, N. Y.

Since March, 1935 cyclopropane has been used at Kings County Hospital for approximately one hundred and fifty thoracic operations. This series includes rib resection for drainage in empyema, thoracoplasty, lobectomy, pneumomectomy and drainage of lung abscess.

Apparatus: We use a modern gas machine, equipped with soda lime filter, which delivers a measured, fine flow of the gases.

Technique: For induction of anesthesia, the soda lime is cut off and the bag partly filled with oxygen. The mask is placed on the patient's face and patient allowed to inhale oxygen for a few seconds; the cyclopropane is turned on gradually and set at 600 ccs, the oxygen at 3½ liters. The patient breathes this 15 per cent mixture from 5 to 7 minutes, when surgical anesthesia should be established. At this time the filter may be turned on, and the respirations controlled by removing or filtering out the carbon dioxide. Respirations are very quiet and shallow, and fear of cyanosis is eliminated because of the high percentage of oxygen administered.

Patients are anesthetized in the prone position with head resting on a small pillow; when anesthesia is established, the patient is placed on his side, lying on the good lung, and a long sand bag is placed against the chest extending to the abdomen. Both arms are extended towards the head; this is most important to the surgeon, as it exposes the field of operation and definitely locates the scapular angle. By slightly breaking the table in the middle the ribs are separated somewhat, giving the surgeon more room to work.

Pre-operative Medication: Patients are given one grain of codeine sulphate the night before operation and ¼ grain of morphine sulphate and 1/200 grain of scopolamine one half hour before coming to the operating room. In some instances when the patient is especially nervous a small dose of avertin (60 milligrams per kilo) is administered. This is given without the preliminary morphine and scopolamine.

Pulse and Blood Pressure: In some patients there is a slight increase in pulse rate in second stage operations; this is more marked if the patient is nervous and apprehensive. However, it is not alarming unless the pulse increases gradually during the operative procedure. If the pulse continues to increase it should be reported to the surgeon, as it is usually necessary to terminate the operation and continue at a later date. The blood pressure should be taken and recorded during every operation. Usually these readings show slight variation except in shock. This is often counteracted by a continuous venoclysis of five percent glucose in saline during the operation.

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* Read at the third annual meeting of the New York Association of Nurse Anesthetists, held in Buffalo, N. Y., May 21st, 1936.

Bleeding: There is a difference of opinion as to whether or not there is increased bleeding in cyclopropane anesthesia. In chest work we have found that there is an increased capillary oozing but when the anesthetic is discontinued bleeding stops.

Relative Value of Other Anesthetics in Thoracic Surgery: Ether is not an anesthetic of choice, as it often starts the patient coughing; this is difficult to control and makes the procedure much more difficult for the surgeon.

Nitrous oxide: It is almost impossible to get complete anesthesia with nitrous exide because of the impaired lung expansion; respirations are labored and patients often become cyanosed during the operation and remain so for several hours afterwards. There is also greater expansion of the chest wall, which interferes with the operative procedure.

Cyclopropane: We have found cyclopropane the ideal anesthetic because respirations are shallow but sufficient; the irritation of the mucous membrane, excessive secretions, and cyanosis are absent. The immediate reaction of the patient post-operatively allows the surgeon to know the patient's general condition at once, and there is no nausea or vomiting.

In thoracic surgery we are anesthetizing patients whose vital capacity is greatly diminished, and with cyclopropane the surgeon appreciates the controlled respirations and he also knows that his patient is obtaining sufficient oxygenation throughout the procedure.

Like ether and ethylene, cyclopropane is explosive and inflammable and should not be administered in the presence of cautery or the electric knife.

Intratracheal: For experimental purposes we have used intratracheal about ten times and we have found it most satisfactory. The recovery was unusually rapid and in many instances the patient was talking intelligently on leaving the operating room.

Post-operative Treatment: Every patient at the completion of the operation is given 750 ccs of 5 per cent glucose in saline intravenously; later, coffee by Harris drip, 2 hours on and 2 hours off; and one-quarter grain of morphine sulphate every four hours for 36 hours unless the respiratory rate is below twelve.

Complications

1. The patient's general condition during the operation as evidenced by pulse, blood pressure and respirations, is usually so good that the surgeon is apt to work longer than he would with other anesthetics.

2. When the patient starts to go bad under cyclopropane, the rise in pulse and drop in blood pressure comes on very rapidly, much more rapidly than with other anesthetics. For this reason the surgeon must not be deceived by the patient's apparently excellent condition and we make it a rule not to work over a specified time, i. e., an average of 30 to 35 minutes, and less in instances in which the patient is known to be a poor surgical risk.

3. The patient's color, which is always good, should never be taken as an indication of his general condition.

While cyclopropane anesthesia has received some unfavorable comments, it has been our experience that the foregoing advantages far outweigh any disadvantages that have been put forth to date.

ANESTHESIA IN BONE SURGERY IN CHILDREN*

JOHN A. HEBERLING, M.D.
Allegheny General Hospital, Pittsburgh, Pa.

Spinal fusion may be taken as a very fair criterion of all bone operations in children as far as anesthesia is concerned. I would place the chief risks in bone work on children as spinal fusion, extensive osteomyelitis, particularly of the femur, and fusion operations on the feet where both are done at one sitting (the last, only because of the time necessary to do both operations).

In a recent review of 197 patients on whom spinal fusion was performed at the Allegheny General Hospital in the ten year period from 1925 to 1934 inclusive, I found that 68 operations were done on children under sixteen with tuberculosis of the spine and 34 for other conditions, chiefly spinal curvature. There was no operative death in any of these cases and no post-operative fatalities—of the 102 patients, all were discharged from the hospital. No tuberculous patient was operated in which evidence of chest involvement could be found clinically; radiographic examination of the chest was not made routinely but when tuberculosis was suspected by physical examination, the chest was X-rayed, and if any doubts remained the patient was treated by conservative methods. The youngest patient operated in this series was 2½ years of age and a second patient was operated at the age of 3½, who had been under treatment for 1½ years. The greatest number of vertebrae involved was seven, which meant a fusion of nine vertebrae.

Shock does not occur following fusion in tuberculosis of the spine in nearly as great proportion as in those in which the operation is done for curvature, and the latter patient must be carefully prepared. Pre-operative preparation consists in first getting the patient in as good general condition as possible and routine examinations include the chest, urine, blood count and hemoglobin estimation. When necessary transfusions are given, preferably two or three days before operation, plenty of fluids the day before and glucose in the form of brown sugar, hard candy, or in lemonade. No morphine is used in children under sixteen, but atropine is given routinely.

The sooner the patient is operated on following admission to the hospital the better the post-operative course—long hospitalization does not make for a smooth convalescence. It has been our custom for many years at the D. T. Watson Home to bring the children to the hospital the morning of operation, doing the routine preparation at the Home, and except in rare instances returning them the next day. We have seen no ill effects and have found their recovery to be much more rapid in the environment to which they are accustomed.

The operation itself should be well planned beforehand so that no time is lost doing anything but the necessary procedures. Operating time should be as short as possible—anything over one hour is too long. In doing spinal fusion the position of the patient on the table is most important—turning the child slightly to one side and placing a small, firm pillow under one shoulder raises the chest and allows free, unrestricted breathing. Preparation of the plaster cast beforehand saves a great deal of time and does away with the danger incident to putting wet plaster on a patient who has already had considerable anesthetic—indeed, in some cases, it takes almost as long to apply the cast as to perform the actual operation. In all spinal cases and in many operations on the hip joint, the cast can always be made a day or two before, removed and dried in preparation for the operation. In performing operations on the feet such as arthrodesis, astragalectomy and procedures of this type where both feet are to be done, we have been using two teams, one for each foot, which cuts the operating time in half.

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* Read at the fifth annual meeting of the Pennsylvania Association of Nurse Anesthetists, held in Pittsburgh, Pa., April 23rd, 1936.

The anesthetic itself, in my opinion, is best started with gas and continued with ether, which in spite of our many new preparations, remains the safest and most satisfactory of all. For short operations gas alone works nicely in children. Local infiltration or block anesthesia is totally unsatisfactory and I do not believe spinal anesthesia has more than a very limited field in children. The patient should be kept rather deeply anesthetized for most bone operations, especially when there is much chiselling or pounding to be done, as this is very likely to produce shock. In spinal fusions we have stopped using the hammer to turn down bone flaps. This can be done with the chisel alone, using a twisting movement with the wrist, and it has no ill effect whatever on the patient. Ether is certainly about as safe as any anesthetic can be. On the children's orthopedic service at the Allegheny General Hospital in the past twelve years there have been no deaths on the operating table and no deaths from shock. One patient developed pneumonia but recovered, following anesthesia incidental to a closed reduction of a congenital dislocation of the hip, and one patient following arthroplasty of the hip died 24 hours after operation from a large pulmonary embolus, demonstrated at autopsy. The common post-operative complications are (1) so-called acidosis, evidenced by continued vomiting and rapid pulse, (2) shock, (3) pneumonia and (4) kidney complications, which I feel are rarely caused by the anesthetic.

Nothing is more important than the care of these patients after operation, and to insure free breathing the position in bed should be the same as on the operating table. Plenty of morphine in older children and deodorized tincture of opium in the younger ones, and fluids, preferably intravenously, are the best safeguards against shock. I have no use for fluids by rectum; the amount absorbed by a child is of no real value. It is taken up too slowly to be of any use and is difficult to give; while by the venous route any amount can be given with the assurance that it will all be absorbed, and there will be no delay. This administration of fluid should not be withheld in the hope that the patient will improve. When there is any question give it at once on the operating table. Post-operative vomiting is best controlled by glucose solution intravenously and gastric lavage. Food should be given as soon as possible and the quicker the child can be returned to its regular diet the better.

This short paper would not be complete without calling attention to the importance of the nurse anesthetist. I feel that the future of anesthesia is in your hands—the day of the physician anesthestist seems to be passing. The younger men, after finishing their internships, do not often take up this work and then only as a temporary occupation and are not interested in anesthesia itself. Internes should have training in anesthesia, under supervision, but should not be allowed to take over the functions of this important work except when absolutely necessary. In my own operative work, not only in Pittsburgh but in nearby towns where I occasionally hold clinics, the administration of anesthetics is almost entirely carried on by the nurse anesthetist, and I say, in all sincerity, that your work has always been most satisfactory and that I am always glad to walk into an operating room and see one of you at the head of the table.

ANESTHESIA IN NEUROLOGICAL SURGERY

IDA M. EDWARDS

Strong Memorial Hospital, Rochester, N. Y.

There is probably little doubt but that the ideal anesthetic for operations upon the central nervous system is novocaine—one-half to one per cent, to which is added to each ounce of solution three or four drops of adrenalin or ephedrine. The reason why novocaine is superior is because consciousness is not lost at any time as a result of the anesthetic, and the anesthetist can judge more accurately the level of consciousness as various procedures are carried out on the parts of the nervous system. However, in this country the majority of patients prefer not to be operated on under local anesthesia. They find that the apprehension, worry and distraction of having something going on close to their ears is more than they can stand. There is a good deal to be said in favor of their argument. Children, of course, ought not to be operated on under local anesthesia, and in fact, cannot be, We, therefore, may dismiss the discussion of this group and turn to the more complicated problem of a general anesthetic.

The various general anesthetics in use are well known to all of you. We prefer by all odds the combination of avertin, local and ether anesthesia. Whenever a general anesthetic is used, there is one outstanding problem that has to be met, and if this can be taken care of adequately, there is little else to worry about. The problem is to secure a state of unconsciousness and, at the same time, to avoid any procedure that will increase the swelling of the brain. Ether in itself, no matter how skillfully given, is apt to produce a slight amount of edema of the brain. It has been shown that cerebrospinal fluid pressures rise considerably after the administration of avertin, no matter how quiet the patient may be. This may be overcome to some extent by the use of morphine as a preliminary medication. With these facts in mind, we will go over some of the details which lead to the securing of a "slack brain." Incidentally, there is little excuse for damaging the brain tissues when the intracranial tension is not excessive.

Among the well known means to prevent swelling of the brain or increase in intracranial tension is the avoidance of excitement or crying in children before operation. To a certain extent this can be accomplished by the use of small doses of morphine, the adminis-

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Read at the third annual meeting of the New York Association of Nurse Anesthetists, held in Buffalo, N. Y., May 21st and 22nd, 1936.

tration of avertin while the patient is still in the room, without the patient necessarily being aware of the administration of an anesthetic, and by the use of side rooms or anesthesia rooms so that the patients do not come directly into the operating room.

Swelling of the brain may be avoided by the very careful administration of ether. After the patient is once anesthetized, some sort of airway should be used if there is the slightest obstruction. Even the obstruction accompanying the blowing of the lips apart is to be avoided. Some clinics prefer intratracheal anesthesia for the reason that it guarantees a free airway. We feel, however, that about the same conditions can be obtained with the intelligent use of pharyngeal airways, nasal tubes, et cetera.

Obstruction to breathing may be prevented by avoiding unusual postures of the head and neck. In particular, one should be on the lookout for the too vigorous use of cerebellar retractors, which are apt to force the chin forward and cause obstruction. In attempting to secure a "hanging brain," such as is necessary in exposing the pituitary body or tumors about the base of the skull, care should be taken that the head is not unduly extended. If the neck is angulated too far backwards, the patient may have difficulty in breathing. Excess of mucus in the respiratory passages should be avoided by the liberal use of suction rather than by the use of atropine, for atropine tends to increase the pulse rate. In the use of the suction it must be remembered that many patients with increased intracranial pressure have dilated veins of the scalp, face and nasal cavities, consequently it would be easy to start troublesome nose bleeding if the catheter is not inserted through the nose into the pharynx gently. The catheters should be pinched off and well lubricated before they are inserted into the nasal cavities.

The increase of intracranial pressure may also be avoided by placing the patient on the table judiciously. It is our custom to have the abdomen and lower extremities at least one foot lower than the head. This creates a syphon effect in the intracranial venous system which prevents to a great degree increased venous pressure within the brain. In some clinics many of the craniotomy operations are done in a sitting position. We do not prescribe to this procedure and believe that it is a passing fancy—it has never gained very wide acceptance. When patients are operated on in the sitting position, such as in operations for trifacial neuralgia, the anesthetist must keep a much closer watch of the pulse and blood pressure.

A well ventilated operating room is most essential. The use of electric fans promotes better circulation under the drapes. Air pockets created about the face by the ether mask or towels should be avoided, as nerve tissue is most susceptible to anoxemia, and the accumulation of carbon dioxide increases the brain tension. An air hose may be used under the drapes, especially in hot weather, to prevent air pockets.

During long operations, it is important to maintain body fluid. Too many covers should be avoided, as it is not uncommon for these patients to perspire freely, and there is always a considerable loss of blood. Large amounts of intravenous 5 per cent glucose and saline may be given if the patient is not hampered by a "tight brain." Subcutaneous fluids and rectal taps are of little value if the blood pressure is low. Blood transfusion started before there is evidence of shock enables the patient to tolerate the operative procedures and many times the operation is completed in one stage, where otherwise two stages would be necessary.

Two of the most important duties of the neurosurgical anesthetist are: First, the establishment and maintenance of a smooth anesthesia, one which will not increase the intracranial pressure, and second, close observation of the patient's condition at all times. Blood pressure, pulse and respirations are taken and recorded every five or ten minutes. The anesthetist should know what to expect when various regions are being explored, so that the surgeon may be kept informed of the true condition of the patient. In children, the respirations are the most important; in adults, blood pressure and pulse. Color is always an essential clue to respiratory exchange. A falling blood pressure when the patient is in the sitting position is a dangerous sign, and should be dealt with at once —the position should be changed, and intravenous fluids administered. An early fall in blood pressure when the patient is in the horizontal position is not so alarming and is usually attributable to psychic fear and can be treated with ephedrine. One may expect a fall in blood pressure when ether is discontinued.

Symptoms of increasing intracranial pressure will be noted first by a rise in blood pressure, with a slowing of the pulse rate, followed by a fall in blood pressure and increasing pulse rate. The anesthetist may expect trouble when cerebrospinal fluid block cannot be relieved at operation; when operations about the posterior fossa are prolonged; when the third ventricle is invaded by tumor, and when air has been placed in the ventricles or subarachnoid space, and a prompt relief of intracranial pressure is not made.

Because of the depressing effect upon the respiratory center, avertin given in doses of 100 to 150 milligrams per kilogram of body weight is considered too high for routine use in neurosurgical procedures, unless given in divided doses. As a usual routine we use 70 milligrams per kilogram of body weight, as an average total dose. If the patient is very old or a greatly debilitated subject, or has third or fourth ventricle involvement, 35 milligrams per kilogram is given, and repeated if it is felt advisable. Avertin is absorbed more rapidly by adipose and nerve tissue than by other tissues of the body, and gives up the drug more slowly. Avertin in small doses used as a basal anesthetic has very little effect on the respirations. The volume may be slightly decreased, but the rate is increased. When ether is supplemented little difficulty is experienced. The induction is not prolonged because of depressed respirations, and usually there is sufficient narcosis so that coughing and struggling is not troublesome.

About 40 per cent of our patients are operated under avertin and local, without ether. The routine technique is as follows: The day prior to operation the patient is placed on a liquid diet, and given an enema during the evening. After the patient has been brought to the operating room the blood pressure and pulse are taken and recorded. The operative area is shaved and the patient placed in the desired position before the avertin is given, unless the patient is apprehensive, in which case the avertin is given on the division. The patient is permitted to remain quiet for ten or fifteen minutes before being moved from the anesthesia room to the operating room.

If during the infiltration of novocaine the patient becomes restless, or seems about to awaken, ether vapor is administered and can often be discontinued after the bone flap has been turned back. It has been found by experience that a short ether anesthesia given soon after the avertin is administered, may produce a much longer narcosis than if started after the patient is actually awake. Ether started early stimulates the respirations and prevents too great a fall in blood pressure. We have found the McKesson ether air machine most efficient for all operations. It is compact and does not occupy a great deal of space. The old type is preferred to the new model because the ether can be discontinued without shutting off the air. The Connell ether mask, the Magill intratracheal tube (used as a nasal tube), and the Foregger hard rubber insufflation airway meet most of our requirements. A small cabinet which has been made purposely to fit under the operating tables accommodates the ether machine, a "D" tank of oxygen, and a suction apparatus. A small drawer provides space for catheters, airways, nasal tubes, masks, gauze, lubricating jelly, adhesive tape, and safety pins. Compressed air and suction pipes are in all operating rooms.

As mentioned before, the position of the patient on the operating table is of great importance. One must secure comfort for the patient, and at the same time obtain adequate exposure of the operative field. Care must be taken to prevent any obstruction to the respiration, and tight straps and bands on any part of the body should be avoided. At no time should there be any venous congestion. All cerebellar and occipital explorations and laminectomy operations are performed with the head resting face downward on a horse shoe shaped crutch. A horizontal position is used for all operations except for encephalograms and operations for trifacial neuralgia, in which case the patient is placed in a dental chair, sitting upright.

If the patient is lying on his back or side, sterile sheets are made to cover two small instrument trays, one passing over the patient's chest like a bridge, and the other extending out from the operating table. The drapes are held free from the patient's face, forming a tent-like space, which is sufficiently large to permit the administration of the anesthetic with little difficulty. When the dental chair is used, a special sheet for the purpose is draped over the operative field and held above the patient's head by means of a tray rack. The drapes for the cerebellar crutch simply fall from the head over a narrow rod which surrounds the crutch, and are pinned back on either side.

Gutta percha is used to seal and protect the eyes from blood and solutions which may ooze down when patient is in the prone position. Powder on the crutch, and adhesive straps over the cheek bones, relieve the face of considerable pressure and friction which may cause broken skin areas. The same precautions are taken in operations for trifacial neuralgia, and other operations where the endotherm is used. Contractions of facial muscles from use of the endotherm may open the eye and for this reason it is well to protect the eyes from ether vapor.

The post-operative care is of great importance. All major craniotomy operations are left on the operating table undisturbed until conscious or nearly so. Before returning to the division suction is used if there is any mucus in the air passages. Many times these patients, because of the area involved in the brain, have difficulty in swallowing. If the patient is kept on the side, rather than on the back, and in a room where suction is available, the chance of aspirating mouth contents is much less. It is an axiom that the unconscious patient does better and breathes better lying on his side rather than flat on his back, also that the unconscious patient needs frequent change of position. Blood pressure, pulse and respirations are taken every five or ten minutes. Rectal temperature is taken when operation is completed and repeated every two hours.

SUMMARY

The neurosurgical anesthetist must bear in mind the following measures which will aid in preventing an increase in intracranial pressure:

1. Preliminary drugs, such as small dose of morphine, and avertin as a basal anesthetic to lessen apprehension.

2. Prevention of struggling and crying before and during the induction stage.

3. Well established anesthesia, maintaining at all times free respiratory exchange.

4. Avoidance of excess mucus in air passages by the use of a suction, rather than by the use of atropine.

5. Comfortable position of the patient on the operating table, with the extremities and abdomen below the level of the head.

6. Avoidance of too tight straps or bands.

7. Prevention of the accumulation of an excess of carbon dioxide.

8. Maintenance of sufficient oxygen supply by the use of air hose.

RIGHT OF NURSE ANESTHETIST TO ADMINISTER GENERAL ANESTHETIC UPHELD BY SUPREME COURT OF CALIFORNIA

The Supreme Court of the State of California, in a recent decision held that the administration of general anesthetics by licensed and registered nurses employed by hospitals in the State of California is not in violation of the Medical Practice Act.

An action for injunction was commenced about two years ago in the Superior Court by William V. Chalmers-Francis, W. D. Wightman, George P. Waller, Jr., and Anesthesia Section of the Los Angeles County Medical Association, as parties plaintiff against Dagmar Nelson, Registered Nurse and St. Vincent's Hospital, charging that as a registered nurse, Miss Nelson had no right to administer general anesthetics and that St. Vincent's Hospital had no right to employ her to administer general anesthetics. The plaintiffs contended that the right to administer general anesthetics was restricted by the terms of the Medical Practice Act to duly licensed physicians, surgeons and dentists.

The defense offered by the defendants was that to engage in the practice of medicine a person would have to diagnose, prescribe and treat an ailment but that in administering an anesthetic a nurse anesthetist is neither diagnosing, prescribing for nor treating an ailment but is merely following the orders and directions of the surgeon who is in charge of the operation.

The Superior Court in which the case was originally filed, decided in favor of Miss Nelson and St. Vincent's Hospital, whereupon the plaintiffs appealed the case to the State Supreme Court. The latter court, which is the highest tribunal in California, affirmed the decision of the Superior Court in every particular, holding that "Nurses in the surgery during the preparation for and progress of an operation are not diagnosing or prescribing within the meaning of the Medical Practice Act." The court further held that the evidence clearly showed that the nurse anesthetist merely carries out the order of the physicians to whose authority they are subject. The court, in its opinion stated: 'We are led further to accept this practice and procedure as established when we consider the evidence of the many surgeons who supported the contention of the defendant nurse and whose qualifications to testify concerning the practice of medicine in this community and elsewhere were established beyond dispute. That such practice is in accord with the generally accepted rule is borne out by the decided cases."

The California decision adds one more to the gradually increasing number of states whose courts have decided in favor of nurse anesthetists on this question.

The National Association of Nurse Anesthetists filed a brief as Amicus Curiae.

CARE OF THE PATIENT ANESTHETIZED BY THE SPINAL METHOD

ORVILLE C. KING, M.D.
Philadelphia, Penna.

Spinal anesthesia has reached a stage in its development which has made its use almost universal. With the proper selection of patients and areas for anesthetization, the safety of this type of anesthesia cannot be questioned. Due to the method of induction it is frequently administered by the operating surgeon or one of his assistants. The patient is then placed under the care of a staff anesthetist. Such a procedure should only be instituted when the anesthetist has been properly instructed and trained in the care of patients so anesthetized.

First let us review briefly the physiology of this type of anesthesia. The primary agent used in spinal anesthesia is procain, or one of its derivatives. Fundamentally there are two types:—(1) procain crystals; (2) procain crystals in solution to which has been added some other elements, as Pitkin's solution (spinocain), or anaestesol. Such solutions may have a specific gravity lighter or heavier than that of spinal fluid. This factor somewhat determines the technique.

While the exact action of procain in the spinal fluid is not known in its entirety, we are aware that certain effects do take place. With the introduction of the anesthetic agent into the subdural space (not into the cord or its roots) the nerve roots that are bathed by the solution lose their power of conduction. This interruption continues until the agent has been absorbed. The following effects take place in this order:—

1. Loss of pain, tactile, temperature and muscle sense by effects upon the posterior nerve roots.
2. Voluntary and involuntary paralysis (reflex) and muscular reaction of involved segments from effects upon the anterior roots.

3. Vasomotor paralysis by the effect upon the white rami communicantes. These effects depend upon the number of white rami anesthetized. It is upon these that blood pressure primarily depends.

4. Local effects
   a. *Heart.* The heart rate becomes slower and the contractions weaker if the sympathetic system affecting such segments is involved, (4th, 5th, 6th thoracic). Otherwise no direct effect can be attributed to the drug itself.
   b. *Lungs.* The parenchyma of the lungs is not affected. The respiratory movements are slow, quiet, somewhat shallow, and largely diaphragmatic due to paralysis of the abdominal musculature. If the paralysis affects the 2nd, 3rd, 4th and 5th cervical roots, phrenic paralysis may occur with resulting apnea.
   c. *Gastro-intestinal tract.* Gastric and intestinal peristalsis is augmented with paralysis of the anal sphincter. The intestines are therefore contracted.
   d. *Urinary tract.* The kidneys are not irritated but their activity may be somewhat diminished dependent upon the fall of blood pressure. There may be slight cyanosis if respirations are markedly decreased.
   f. Consciousness is maintained unless sleep is induced by preliminary medication.

From the patient's viewpoint there occur several symptoms immediately following the injection of the agent. The lower extremities feel warm and tingle. This follows in the remainder of the anesthetized area. These are succeeded by loss of sense of pain, position, and power of motion. As would be expected by nerve distribution, the area of loss of pain is somewhat larger than the area of loss of sense of touch. Frequently the patient will feel the touch of the instruments but without pain. If the anesthetized area involves the lower chest the patient will have a sense of oppression when attempting deep breathing. This is due to a paralysis of a portion of the accessory muscles of respiration. The symptoms as described will continue from one-half to two hours, depending upon the amount of the anesthetic agent used. They then return in the reverse manner. The return of sensation is in rapid order. The patient will notice a tingling sensation, especially in the legs, and within five to ten minutes there will be a complete return of sensation.

Appreciating the physiology incurred in spinal anesthesia, the care of the patient during the anesthetization period should be clearer. To me, the most important factor in this method is to gain the confidence of the individual. This is especially true where the preoperative medication has not removed consciousness. The administration of the anesthetic can, and should be, a painless procedure. When this is explained to the patient and carried out in such a manner, thus assuring him, you will have obtained his confidence. This must be retained to make the anesthetic period successful.

The only apparatuses necessary for the anesthetist's guidance in these patients are:—(1) a sphygmomanometer, (2) a stethoscope and (3) time piece. Numbers 1 and 2 should be placed firmly around the patient's arm farthest away from the surgeon, in such a way that they will not be disturbed by any motion of the surgeon or the patient. The blood pressure should be taken and recorded before the patient has been anesthetized and every one or two minutes thereafter until it becomes stabilized. Once stabilized, it need be recorded at less frequent intervals, as every five minutes. If at any time there is any change noted in the patient's condition it is unnecessary to add that more frequent readings should be made. Some authorities place little value on blood pressure. While we do not believe it to be the only guide as to the condition of the patient, yet we do attach value to it as one of the procedures which serves as an aid in the care of these patients.

While we do not attach particular importance to either the systolic or diastolic blood pressure, we do value the difference between them, or the "pulse pressure." This serves as our guide for the necessity of stimulation. The pulse pressure should be between 30 and 20 millimeters of mercury. Other signs being favorable, when the pulse pressure is maintained between these readings we are not alarmed. When it drops below 20 then measures are necessary to restore it to a higher reading. Our means of doing this is by the instillation of either saline or glucose into a vein. There must be fluid volume in the circulation for the heart to act upon. Ephedrine, epinephrine and other cardiac stimulants are not indicated, providing the heart itself is functioning properly. Such stimulants are more apt to do harm than good, and are only temporary measures. In a series of over eight thousand spinal anesthesias venoclysis was necessary in only two instances, excepting when there was a severe blood loss. In such cases venoclysis followed by transfusion is the method of choice. Usually five hundred to one thousand c.c. of solution is all that is required to increase the pulse pressure.

The pulse rate, rhythm, and volume serve to give additional information. Normally under such anesthesia the rhythm is regular, and the rate slow and of good volume. A pulse rate higher than the systolic pressure with a tendency to increase is an alarming sign and usually indicates either a great loss of blood or extreme shock. The treatment is as outlined for low pulse pressure.

Other aids in evaluating the patient's condition are his general appearance, the presence or absence of perspiration, the warmth of the skin—all these serve as additional sources of information which the experienced anesthetist can appreciate.

The respiratory motion, its depth and rate inform us of signs of the presence or absence of shock and paralysis. Normally the respirations are slow and more shallow than under any other type of anesthesia. When they are rapid and difficult for the patient, then shock is evident. Often in high abdominal anesthetization the patient has difficulty in breathing, due to paralysis of accessory muscles of respiration. These patients complain of a sense of oppression in the chest. Providing these are the only symptoms, such patients can often be relieved by inhalation of carbon dioxide and oxygen (10 and 90%). The inhalation of aromatic spirits of ammonia will also relieve such discomfort in many instances.

When respiratory paralysis is present, which is infrequent under the oresent method of anesthetization, and the cardiac action is maintained, artificial respiration must be begun immediately. Even rhythmic pressure on the chest is the simplest method. At the same time carbon dioxide and oxygen are given by the closed method, being sure that the tongue is not obstructing the air passages. This should be continued until respiratory motion returns. Placing the patient in a respirator will mechanically perform the same services.

When respiratory motion and cardiac

activity cease simultaneously, the above measures must have added to them measures which will stimulate the latter organ as well. Instillation of epinephrine directly into the heart muscles, cardiac massage, and the intramuscular or intravenous instillation of such drugs as coramine should be tried. It has been our experience that when failure presents itself the patient will rarely, if ever, be brought back to life permanently, no matter what has been done to institute it.

The more common complications with spinal anesthesia are nausea and vomiting. These are due to either shock or to tension upon viscera. This is especially true when the tension is directly upon the mesentery. When the vomiting is due to shock, anti-shock therapy must be given. When due to tension it will cease when the surgeon releases this tension. It can frequently be controlled by deep breathing and inhalation of the fumes of aromatic spirits of ammonia. The anesthetist can frequently avoid these discomforting symptoms by anticipating them and advising the patient to exercise deep breathing, at the same time giving him "whiffs" of the spirits of ammonia. All cases of nausea and vomiting cannot be directly attributed to the anesthesia. Much of it we have found has been due to the preliminary medication. It is well known that many patients react thus to morphine and the barbiturates. In instances when actual vomiting occurs, assure the patient that it is not an alarming symptom and does occasionally happen. Be sure to see that none of the vomitus is inspirated and either cleanse the patient's mouth or allow him to do so.

Cooperation between the surgeon, his assistants and the anesthetist are neceassry. A serene quietness should prevail in the operating room. Spinal anesthetized patients are acutely aware of what is said and done. The surgeon should never ask the patient if he feels pain or is hurt. Such questions have an unwise psychological effect upon the patient. The suggestion of pain will often excite him, thus marring the good effects of the anesthesia. Skin testing can be performed at the operating time by pricking the skin and observing the patient's expression. The anesthetist will readily appreciate when the patient has been insufficiently anesthetized. For the general comfort of the patient the anesthetist can perform many apparently trifling measures. Some patients may wish to be quiet, others to carry on a conversation. In the latter case a tactful anesthetist can do a great deal to allay fear and content the patient. Cool towels to the face, moistening the lips and tongue, and where the operation does not contraindicate, small sips of water may be given. Due to the marked relaxation encountered under spinal, it is advisable to place a small firm pillow between the operating table and the "small" of the patient's back. This will eliminate post-operative backache.

Occasionally the duration of anesthesia will be insufficient for operative completion. In these instances further anesthesia is desired. While there is no contraindication to a second subdural nerve block, in most cases it is impracticable. When such is the case, either a local or a general anesthesia is necessary. When relaxation is essential local anesthesia may be out of the question. Knowing the time allowed for the spinal analgesia, by the amount of anesthetic agent used as well as the solution and area anesthetized, knowing also that the operation will consume a longer time than this, begin the general anesthetic before the spinal loses its effect. On the average it should be started from five to ten minutes before the expected elapsed time of the spinal. When started it should be explained to the patient that such is necessary and then the anesthetic should be given with plenty of air. The anesthetic should be increased gradually and slowly. This will eliminate struggling and evisceration, which interfere with the surgical procedure. This is especially true in abdominal surgery. The patient can frequently be brought into surgical anesthesia without appreciation of this change by the surgeon.

When the operation has been completed, and the patient is in good condition, he still must be observed. This period of observation should be continued until sensation and blood pressure have returned to normal. The patient should be moved carefully from the operating table to the bed. He should be placed in the horizontal position with the foot of his bed elevated four to six inches. On returning to the room, the patient's blood presssure, pulse, and respirations should be noted and recorded every five minutes until they are normal. Fluids can be given immediately by mouth, in small amounts, if not contraindicated by the operation. The post-operative care of the patient, in other words, is essentially that of a patient anesthetized by any other method.

Other complications that may occur following subdural anesthesia, such as headache, meningitis and ocular palsies, are due to errors of technique of administration, hence are only mentioned here. The scope of such an article as this one includes only the actual care of the patient following the introduction of the anesthesia, consequently we have not dealt with the problems of its technique. However, we may mention here that with the modern drugs and methods available, serious complications following spinal anesthesia are infrequent. We have brought them to your notice because they have happened, and may happen again. When such is the case you should be able to anticipate them and give the proper treatment. The majority of patients so anesthetized are brought through the anesthetization period wih no alarming symptoms.

In a general way we have attempted to tell you of the physiology and symptoms which develop during spinal anesthesia. We have emphasized the care needed by patients anesthetized in such a manner. Other complications such as headache, nerve root damage, et cetera, are primarily due to the technique of administration. To reiterate, aside from its technique the success or failure of spinal anesthesia depends upon the tact and thoughtfulness and experience of the anesthetist who cares for the patient during the operative period.

PENNSYLVANIA ASSOCIATION OF NURSE ANESTHETISTS MEETS

The fifth annual meeting of the Pennsylvania Association of Nurse Anesthetists was held simultaneously with the Pennsylvania Hospital Association, in Pittsburgh, April 22nd, 23rd and 24th, 1936. At this meeting the Pennsylvania anesthetists displayed the same keen interest, enthusiasm and indomitable spirit as has always been characteristic of that group. The sessions were well planned, well attended, and the anesthetists went home feeling that the educational value of such meetings had been forcibly demonstrated at that particular meeting.

J. Allen Jackson, M.D., President of the Pennsylvania Hospital Association, brought greetings from the hospital association and on behalf of that organization expressed the desire that in the future the meetings of the two groups continue to be held simultaneously. The anesthetists are keenly aware of the great advantages accruing from this affiliation and they appreciate the continued support of the hospital organization.

Among those who took part in the program were:

Hilda R. Salomon, President, National Association of Nurse Anesthetists, Jewish Hospital, Philadelphia

Marian L. Robinson, President, Pennsylvania Association of Nurse Anesthetists, Pennsylvania Hospital, Philadelphia.

C. R. Grissinger, D.D.S., Pittsburgh

Philip A. Faix, M.D., Mercy Hospital, Pittsburgh.

Joseph A. Perrone, M.D., Mercy Hospital, Pittsburgh

Richard Simon, M.D., Mercy Hospital, Pittsburgh

A. R. McCormick, M.D., Pittsburgh

G. C. Weil, M.D., Mercy Hospital, Pittsburgh

George J. Thomas, M.D., University of Pittsburgh

Irvin D. Metzger, M.D., Chairman, State Board of Medical Education and Licensure, Harrisburg

John A. Heberling, M.D., Allegheny General Hospital, Pittsburgh

Elfreda Barie, St. John's Hospital, Pittsburgh

Anne Blance Foster, Citizens General Hospital, New Kensington

Grace Williams, Mary Roenbaugh, and Gertrude Render presided at the meetings. On Thursday, April 23rd, a clinic was conducted at Mercy Hospital, with demonstrations of cyclopropane anesthesia. The banquet of the Pennsylvania Hospital Association, to which the anesthetists were invited, was well attended and proved to be a delightful occasion.

At the business sessions, held Friday, April 24th, reports of the following committees were read:

Membership
R. Margaret Kramlich, Chairman
Public Relations
Sara A. Ponesmith, Chairman
Educational
Mary E. Walton, Chairman
Nominating
Theresa A. McTurk, Chairman

The following officers were elected for the ensuing year:

First Vice-President—2 years
Mathilda Cavan
Mercy Hospital, Wilkes-Barre
Second Vice-President—1 year
Elfreda Barie
St. John's Hospital, Pittsburgh
Secretary-Treasurer—2 years
Rose G. Donovan
Mt. Sinai Hospital, Philadelphia
Trustees for two years
Alverta K. Haines
Altoona Hospital, Altoona
Anne Machusak
Polyclinic Hospital, Harrisburg
Naomi Johnston
Methodist Hospital, Philadelphia

The following changes were made in the by-laws:

ARTICLE X, Section 4:

"Members in arrears at the annual meeting of the Association shall be suspended for non-payment of dues after thirty days' notification."

Amended to read as follows: "Members in arrears at the annual meeting of the Association shall be suspended for non-payment of dues."

ARTICLE X, Section 7:

"The fiscal year shall be from May 1st to April 30th."

Amended to read as follows: "The fiscal year shall be from April 1st to March 31st."

The Secretary-Treasurer's report, which follows, was of particular interest to the group. It told the story of a year of hard work on the part of the officers, and a year of continued interest on the part of the members.

Secretary-Treasurer's Report

Increase in membership for the year 1935	44
Pieces of mail received	554
Pieces of mail sent out	1154
Questionnaires sent to hospital superintendents	228
Replies received	209
Application blanks sent out	89

Balance on hand June 15, 1935			$ 6.69
Receipts			
Dues		$ 941.00	
Initiation fees		46.00	
Contributions			
District No. 1	$ 37.50		
District No. 6	30.00	67.50	1054.50
			$1061.19
Disbursements			
Transfer of dues to National Association		$ 487.50	
Transfer of fees to National Association		46.00	
Office Expenses		6.60	
Miscellaneous		37.95	578.05
Cash on hand and in bank April 21, 1936			$ 483.14
Consisting of the following:			
Cash on hand		$ 107.00	
Cash in bank		376.14	$ 483.14

(signed) Rose G. Donovan, Secretary-Treasurer

NEW YORK ELECTS OFFICERS FOR 1936

The following officers were elected at the annual meeting of the New York Association of Nurse Anesthetists, which was held in Buffalo, May 21st and 22nd, 1936:

President

Ida M. Edwards

Strong Memorial Hospital, Rochester, N. Y.

Vice-President

Gertrude Steffen

Long Island College Hospital, Brooklyn, N. Y.

Secretary-Treasurer

Hazel Blanchard

1910 Seventh Avenue, Troy, N. Y.

Historian
  Helen Craven
  City Hospital, Welfare Island, New York City

Board of Trustees
  Eva Dickson
  Brooklyn Hospital, Brooklyn, N. Y.

Sister Mary Inez Omalia
1365 Abbott Road, Buffalo, N. Y.

Cora McKay
Albany Hospital, Albany, N. Y.

FIRST ANNUAL MEETING OF MISSOURI ASSOCIATION OF NURSE ANESTHETISTS

The first annual convention of the Missouri State Association of Nurse Anesthetists was held in St. Louis June 26th and 27th, in conjunction with the Mid-West Hospital Association.

Supplementing the regular "guest speaker" luncheons, round table and general businesss session, a joint round table was held with the Hospital Association, during which many topics of mutual interest were discussed. This joint conference idea suggests the possibility of considerable future elaboration.

The anesthetists' meetings were well attended throughout the following program:

Friday, June 26th, 1936, Hotel Jefferson

12:00 noon. Registration

12:30 P.M. Luncheon—"Cyclopropane-Chemical and Clinical Aspects of Its Administration"
  Floyd T. Romberger, M.D., Lafayette, Ind.

2:30 P.M. Round table — "Proposed Legislation Affecting the Nurse Anesthetist"
  Anna Cox, Missouri Baptist Hospital, St. Louis, presiding

3:30 P.M. Business meeting — Helen Lamb, President Missouri Association of Nurse Anesthetists, Barnes Hospital, St. Louis, presiding

7:00 P.M. Banquet — in conjunction with the Mid-West Hospital Association

Saturday, June 27th, Hotel Jefferson

12:15 P.M. Luncheon—"Value of Professional Organization"
  E. Muriel Anscombe, F.A.C.H.A., Administrator Jewish Hospital, St. Louis

"What the Hospital May Expect of the Nurse Anesthetist"
  Cleveland Shutt, M.D., St. Louis

"What the Nurse Anesthetist May Expect of the Hospital Personnel"
  Sylvia Cole, Jewish Hospital, St. Louis

2:00 P.M. Round table discussion in conjunction with the Mid-West-Hospital Association

"Problems in Hospital Administration, Anesthesia, Et Cetera, Et Cetera"
  Malcolm T. MacEachern, M.D., F.A.C.H.A., Associate Director American College of Surgeons, Chicago, presiding

The following officers and Board of Trustees were elected for the ensuing year:

President
  Cecilia Frein
  St. John's Hospital, St. Louis, Mo.

First Vice-President
  Anna Gettinger
  St. Louis City Hospital, St. Louis

Second Vice-President
Doris Grupp
908 Beaumont Medical Bldg., St. Louis

Treasurer
Lois Rhodes
Barnes Hospital, St. Louis

Secretary
Sylvia Cole
Jewish Hospital, St. Louis

Board of Trustees
- Anna Cox
- Cecilia Frein
- Anna Gettinger
- Louise Jekel
- Helen Lamb
- Jessie Lindsay
- Lois Rhodes

TENNESSEE AFFILIATES WITH THE NATIONAL ASSOCIATION

The affiliation of the Tennessee Association as a State Division with the National Association was completed on June 29th, 1936.

The officers of the Tennessee Association are as follows:

President
Jennie Houser
Memphis General Hospital, Memphis, Tenn.

Vice-President
Gertrude Alexander Troster
654 Stonewall Place, Memphis, Tenn.

Secretary-Treasurer
Jean O'Brien
869 Madison Ave., Memphis, Tenn.

ACTIVITIES OF THE OREGON ANESTHETISTS

A group of anesthetists in Portland held a meeting on October 5th, 1935, to discuss the advisability of forming a state organization. A notice of a meeting to be held November 16th, 1935, was then sent to every nurse anesthetist in the state. At the meeting on November 16th twenty-four anesthetists were present. Officers were elected, and the objectives of the newly organized association were discussed. On December 12th, 1935, the association held another meeting, at which time a constitution and by-laws were adopted. These meetings were held at St. Vincent's Hospital, Portland.

On March 23rd, 1936, a meeting was held at Multnomah County Hospital, Portland, and a most interesting and instructive lecture was given on the use of avertin as a basal anesthetic. The last meeting was at Good Samaritan Hospital, Portland, and a round table was conducted on the administration of cyclopropane.

If the meetings are held at the various hospitals it creates a more active interest among the members. A social hour with refreshments following the business meeting allows the members to become acquainted and offers them an opportunity to discuss anesthesia problems informally. The membership of the Oregon Association now totals 39 active and 3 associate.

Bernice Maher, Secretary
2475 N. W. Westover Road,
Portland, Oregon

The National Association of Nurse Anesthetists does not hold itself responsible for any statements or opinions expressed by any contributor in any article published in its columns.

Members National Association of Nurse Anesthetists

ALABAMA

Beddow, Annie M.	Norwood Hospital	Birmingham, Ala.
Bell, Fannie R.	St. Vincent's Hospital	Birmingham, Ala.
Bradford, Elizabeth	South Highlands Infirmary	Birmingham, Ala.
Burnes, Sarah Ola	Forrest General Hospital	Gadsden, Ala.
Card, Jennie A.	Gorgas Hospital	Birmingham, Ala.
Foust, Alma Clyde*	Colbert County Hospital	Sheffield, Ala.
Hibbetts, Mary J.	St. Vincent's Hospital	Birmingham, Ala.
Hill, Emily McClinton	Bellamy Hospital	York, Ala.
Holmquist, Edith	South Highland Infirmary	Birmingham, Ala.
Long, Elsie Owens**	306 Medical Art Building	Birmingham, Ala.
Maenner, Rose E.	59 Le Moyne Place	Mobile, Ala.
Michaelis, Clara	310 First National Bank Bldg.	Birmingham, Ala.
Rice, Verna M.	R. F. D. No. 1, Box 116	Mobile, Ala.
Stone, Clara	420 N. Wood Avenue	Florence, Ala.
Traber, Anna	2124 Highland Ave.	Birmingham, Ala.
Warlick, Hattie	1127 So. 12th St.	Birmingham, Ala.
Williams, Jennie F.	Fraiser Ellis Hospital	Dothan, Ala.

ARIZONA

Keegan, Helen	Calumet Hospital	Douglas, Arizona

ARKANSAS

Petty, Blanche G.	c/o Dr. Sterling P. Bond 726 Donaghey Bldg.	Little Rock, Ark.
Pollard, Katie	St. Vincent's Infirmary	Little Rock, Ark.
Raper, Edith W.	Trinity Hospital	Little Rock, Ark.
Sims, Mary Porter***	Oakland Ave.	Helena, Ark.
Summers, Mary Duncan	Julia Chester Hospital	Hope, Ark.

CALIFORNIA

Ackerman, Edith	General Hospital	San Luis Obispo, Cal.
Andersen, Emmeline	Mercy Hospital	Sacramento, Cal.
Barbee, Genevieve	1318 Pine St.	Martinez, Cal.
Barker, Betty	St. Francis Hospital	San Francisco, Cal.
Bartron, Kathryn	1035 Bush St., Apt. No. 2	San Francisco, Cal.
Bates, Alta	Alta Bates Hospital	Berkley, Cal.
Bickel, Martha	1167 Bush St., Apt. 706	San Francisco, Cal.
Bishop, Anna K.	St. Mary's Hospital	San Francisco, Cal.
Bulin, Emma J.	Jackson Lake Hospital	Oakland, Cal.
Cain, Laura L.	1530 Marsh St.	San Luis Obispo, Cal.
Casey, Veronica	San Francisco Hospital	San Francisco, Cal.
Clark, Bertha M.	416 Hawthorne	Oakland, Cal.
Clutton, Evangeline M.	Peralta Hospital	Oakland, Cal.
Deering, Bessie G.	Sutter Hospital	Sacramento, Cal.
Duncan, Cleo	St. Mary's Hospital	San Francisco, Cal.
Ellis, Vyevene	St. Francis' Hospital	San Francisco, Cal.
Gillen, Julia Mae***	574 Walnut St.	Palo Alto, Cal.
Graham Katherine H.	San Francisco Hospital	San Francisco, Cal.
Grimes, Flora A.	Sutter Hospital	Sacramento, Cal.
Guptill, Martha M.**	Samuel Merritt Hospital	Oakland, Cal.
Hebert, Marie Lya	St. Francis' Hospital	Santa Barbara, Cal.
Holmes, Amelia L.	San Joaquin Hospital	French Camp, Cal.
Hoover, Zola P.	Rt. 7, Box 4119	Sacramento, Cal.

*President State Association
**Secretary State Association
***Associate Member

Jevne, Sophie	502 Guaranty Bldg.	Hollywood, Cal.
Johnson, Mary	1904 Franklin St.	Oakland, Cal.
Jones, Edith H.	St. Francis' Hospital	San Francisco, Cal.
Keenan, Katherine	St. Mary's Hospital	San Francisco, Cal.
Kittleson, Beatrice M.	Peninsula Com. Hospital	Carmel-by-the-Sea, Cal.
Krekeler, Irene F.***	523 B 42nd St.	Oakland, Cal.
Kulchar, Helen E.	East Oakland Hospital	Oakland, Cal.
McCartan, Elizabeth	Emergency Hospital	Stockton, Cal.
McCoppin, Margaret	Sutter Hospital	Sacramento, Cal.
Malamphy, May	Southern Pacific Hospital	San Francisco, Cal.
Modaff, Louise	St. Francis Hospital	Santa Barbara, Cal.
Morgan, Gay	Southern Pacific Hospital	San Francisco, Cal.
Ogelsby, Fannie M.	Peralta Hospital	Oakland, Cal.
Peck, Virginia	1051 Flood Bldg.	San Francisco, Cal.
Pence, Mada	Enloe Hospital	Chico, Cal.
Peters, Lillian L.	San Francisco Hospital	San Francisco, Cal.
Piercy, F. Margaretta	San Francisco City & County Hospital	San Francisco, Cal.
Quarles, Myra B.*	Children's Hospital of the East Bay	Oakland, Cal.
Rausch, Sarah	Mary's Help Hospital	San Francisco, Cal.
Root, Matilda		
Schreiber, Olga E.	Mercy Hospital	Sacramento, Cal.
Schultz, Adella I.	Providence Hospital	Oakland, Cal.
Searcy, Geraldine L.	San Francisco Hospital	San Francisco, Cal.
Snail, Alice Edith***	Tuolumne County Hospital	Sonora, Cal.
Stevenson, Mary J. R.	East Oakland Hospital	Oakland, Cal.
Suggett, Nan	St. Francis Hospital	San Francisco, Cal.
Tynan, Gertrude L.	Providence Hospital	Oakland, Cal.
Vortman, Helen A.	Sutter Hospital	Sacramento, Cal.
Walsh, Blanche L.	1904 Franklin St.	Oakland, Cal.
Watkins, Kathryn	Samuel Merritt Hospital	Oakland, Cal.
Wilkinson, Irma	1280 Grove St., Apt. 301	San Francisco, Cal.
Wilson, Eva M.	Highland Hospital	Oakland, Cal.
Witt, Clara M.	Peralta Hospital	Oakland, Cal.
Yost, Marian L.	St. Francis Hospital	San Francisco, Cal.

COLORADO

Adair, Helen M.	Children's Hospital	Denver, Colo.
Carpenter, May Morcom	2370 Ash St.	Denver, Colo.
Currie, Ethel F.	Presbyterian Hospital	Denver, Colo.
Heckert, Sadie L.	3326 West 29th Ave.	Denver, Colo.
Kramer, Margaret L.	Corwin Hospital	Pueblo, Colo.
Macfarlane, Louise E.	Parkview Hospital	Pueblo, Colo.
Moon, Henrietta M.	Presbyterian Hospital	Denver, Colo.
Pollock, Loda Lee	St. Luke's Hospital	Denver, Colo.
Sister Rose Bernadette Van Zele	St. Joseph Hospital	Denver, Colo.
Stevens, Ann McDonald	Mercy Hospital	Denver, Colo.
Waggoner, Mildred C.	Fitzsimmons General Hospital	Denver, Colo.

CONNECTICUT

Bander, Edna M.	New Haven Hospital	New Haven, Conn.
Barry, Anna M.	St. Francis Hospital	Hartford, Conn.
Blaney, May V.	St. Francis Hospital	Hartford, Conn.
Clarke, Lula Agnes	Litchfield County Hospital	Winsted, Conn.
Davis, Barbara Hine***	Wallingford Tuberculosis Relief Association	Wallingford, Conn.
Fanning, Julia F.	New Britain General Hospital	New Britain, Conn.

Golding, Mildred I.	Lawrence & Mem'l Associated Hospitals	New London, Conn.
Hunt, Alice M.	New Haven Hospital	New Haven, Conn.
Hutchison, Doris I.	Manchester Mem'l Hospital	Manchester, Conn.
Jelinek, Elsie Alice	St. Vincent's Hospital	Bridgeport, Conn.
Kunselman, Sarah J.	Litchfield County Hospital	Winsted, Conn.
Lemon, Mary	Bridgeport Hospital	Bridgeport, Conn.
MacPherson, Margaret	St. Vincent's Hospital	Bridgeport, Conn.
McKeon, Anna	Lawrence & Mem'l Associated Hospitals	New London, Conn.
Myers, Margaret	Danbury Hospital	Danbury, Conn.
Norwood, Alice L.	Charlotte Hungerford Hospital	Torrington, Conn.
Powers, Annie E.	370 Collins St.	Hartford, Conn.
Ryan, Ellen	Danbury Hospital	Danbury, Conn.

DELAWARE

Gentle, Marjorie M.	Wilmington General Hospital	Wilmington, Del.

DISTRICT OF COLUMBIA

Ferguson, Geraldine V.	Army Medical Center	Washington, D. C.
Fox, Carrie Belle C.	1345 19th St.	Washington, D. C.
Lomax, Mary E.	Walter Reed Hospital	Washington, D. C.

FLORIDA

Brown, Mary C.	University Hospital	Coral Gables, Fla.
Compton, Evon E.	Orange Clinic	Orlando, Fla.
Creelman, Margaret E.	Tampa Mun. Hospital	Tampa, Fla.
Davis, Nellie G.	1426 N. 9th St.,	St. Petersburg, Fla.
Duffey-Fox, L. De Ette	Florida Sanitarium & Hospital	Orlando, Fla.
Ellis, Ida Tedford	1210 Kuhl Ave.	Orlando, Fla.
Kenney, Florence	St. Joseph's Hospital	Tampa, Fla.
Kossack, Michalina A.	Dade County Hospital	Miami, Fla.
Kossack, Theresa	University Hospital	Coral Gables, Fla.
Sheppard, Dorothea	810 Huntington Bldg.	Miami, Fla.

GEORGIA

Breshnahan, Mary	Central Georgia Hospital	Savannah, Ga.
Carnes, Rhea	Archbold Memorial Hospital	Thomasville, Ga.
Dasher, Annie L.	202 E. Liberty St.	Savannah, Ga.
Knight, Ethel	Athens General Hospital	Athens, Ga.
Litzen, Catherine	Emory University Hospital	Emory Univ'sity, Ga.
McDonald, Rosalie C.	Emory University Hospital	Emory Univ'sity, Ga.
McLean, Madge	Henrietta Egleston Hospital	Atlanta, Ga.
Rowzee, Theo Lanier	1120 Doctors Bldg.	Atlanta, Ga.

IDAHO

Cook, Josephine	Idaho Falls Hospital	Idaho Falls, Idaho
Henggeler, Martha M.	500 Eastman Bldg.	Boise, Idaho
Kester, Hilda H.***		Priest River, Idaho
Mathews, Newty	Box 23	Murtaugh, Idaho
Sister Joseph Arthur	Providence Hospital	Wallace, Idaho

ILLINOIS

Abell, Ora E.	Schmitt Memorial Hospital	Beardstown, Ill.
Blau, Pauline A.	American Hospital	Chicago, Ill.
Blickendorfer, Anna	Grant Hospital	Chicago, Ill.
Brooks, Mary	Berwyn Hospital	Berwyn, Ill.
Burke, Ursula M.	Evanston Hospital	Evanston, Ill.
Brown, Avis M.	Sherman Hospital	Elgin, Ill.

Burnett, Anna P.	Victory Memorial Hospital	Waukegan, Ill.
Cameron, Mae B.	Ravenswood Hospital	Chicago, Ill.
Carico, Pauline R.	Champaign County Hospital	Urbana, Ill.
Colvin, Thelma V.	Hinsdale Sani. & Hospital	Hinsdale, Ill.
Coupland, Margaret	Methodist Hospital	Peoria, Ill.
Daniels, Clorecia	653 Belmont Ave.	Chicago, Ill.
Estry, Mable M.	Michael Reese Hospital	Chicago, Ill.
Fossum, Alma	Mt. Sinai Hospital	Chicago, Ill.
Girkin, Nettie R.	Michael Reese Hospital	Chicago, Ill.
Gruska, Hermina E.	Jackson Park Hospital	Chicago, Ill.
Guibor, Helen	536 Christie St.	Ottawa, Ill.
Hallowell, Esther	Silver Cross Hospital	Joliet, Ill.
Halm, Vincentia G.	West Suburban Hospital	Oak Park, Ill.
Hanner, Bonnie B.	West Suburban Hospital	Oak Park, Ill.
Hansen, Elizabeth T.	Henrotin Hospital	Chicago, Ill.
Hard, Mabel D.	Jackson Park Hospital	Chicago, Ill.
Hartley, Ora M.	Grant Hospital	Chicago, Ill.
Hellickson, Helga C.	Ravenswood Hospital	Chicago, Ill.
Henne, Bessie M.	Evang. Deaconess Hospital	Freeport, Ill.
Hickey, Mary C.	St. Joseph Hospital	Chicago, Ill.
Hoagland, Jennie	Cook County Hospital	Chicago, Ill.
Hoffman, Gladys Mary	Englewood Hospital	Chicago, Ill.
Hoyt, Margaret L.	Augustana Hospital	Chicago, Ill.
Hunt, Valeda V.	Methodist Hospital	Peoria, Ill.
Kasten, Mary C.	St. Anne's Hospital	Chicago, Ill.
Kraus, Paula	Henrotin Hospital	Chicago, Ill.
Krawczyk, Anna A.	Woodlawn Hospital	Chicago, Ill.
Krewson, Josephine E.	St. Luke's Hospital	Chicago, Ill.
Lane, Maud	Englewood Hospital	Chicago, Ill.
Lebkuecher, Ethel M.	Decatur & Macon Co. Hospital	Decatur, Ill.
Leidel, Leeta	Wabash Hospital	Decatur, Ill.
Lemmons, Geneva	Franklin Blvd. Hospital	Chicago, Ill.
Lenihan, Julia	Frances Willard Hospital	Chicago, Ill.
Lewis, Myrna	Mt. Sinai Hospital	Chicago, Ill.
Loehrke, Amelia J.	427 Garfield Ave.	Chicago, Ill.
McCall, Catherine	Frances E. Willard Hospital	Chicago, Ill.
McGraw, Mary R.	Dixon Public Hospital	Dixon, Ill.
Mahoney, Alice I.	Belmont Hospital	Chicago, Ill.
Maisnik, Shirley	Cook County Hospital	Chicago, Ill.
Marsh, Margaret	Woodlawn Hospital	Chicago, Ill.
Massey, Beatrice E.	West Suburban Hospital	Oak Park, Ill.
Myres, Wanda M.	Belmont Hospital	Chicago, Ill.
Myrseth, Gudrun	Ingalls Memorial Hospital	Harvey, Ill.
Nelson, Anna N.	Grant Hospital	Chicago, Ill.
Nelson, Edith Patton	Westlake Hospital	Melrose Park, Ill.
Nugent, Agnes L.	St. Joseph Hospital	Chicago, Ill.
O'Day, Exire	Ravenswood Hospital	Chicago, Ill.
O'Leary, Helen E.	Passavant Hospital	Chicago, Ill.
Olson, Anna M.	Grant Hospital	Chicago, Ill.
Pettigrew, Sara N.	105 West 3rd St.	Sterling, Ill.
Pippereit, Martha A.	Chicago Memorial Hospital	Chicago, Ill.
Priester, Ann	West Suburban Hospital	Oak Park, Ill.
Richart, Valeria Dawson	213 South 16th St.	Herrin, Il.
Riley, Alice M.	Augustana Hospital	Chicago, Ill.
Roth, Jean	Mercy Hospital	Chicago, Ill.
Roun, Anna M.	Passavant Hospital	Chicago, Ill.
Sister M. A. Rauch	St. Joseph's Hospital	Joliet, Ill.
Sister M. Borgia Gabrys	St. Anthony Hospital	Chicago, Ill.
Sister M. B. Suplicka	St. Francis Hospital	Peoria, Ill.
Sister M. C. Ziskel	St. Charles Hospital	Aurora, Ill.

Sister M. Cleta Mehn	St. Elizabeth's Hospital	Granite City, Ill.
Sister M. C. Berwarth	St. Anthony's Hospital	Chicago, Ill.
Sister M. G. Schiffer	St. Joseph's Hospital	Elgin, Ill.
Sister M. H. Nowak	St. Francis Hospital	Freeport, Ill.
Sister M. H. Makstutis	St. Joseph's Hospital	Joliet, Ill.
Sister M. I. Cassellius	St. Joseph's Hospital	Joliet, Ill.
Sister Jovita Schumann	St. Joseph's Hospital	Joliet, Ill.
Sister M. K. Flentz	St. Mary's Hospital	LaSalle, Ill.
Sister M. L. Odenthal	St. Joseph's Hospital	Joliet, Ill.
Sister M. L. Panter	St. Francis Hospital	Freeport, Ill.
Sister M. Cassellius	St. Charles Hospital	Aurora, Ill.
Sister M. O. Wiederkehr	St. Joseph's Hospital	Elgin, Ill.
Sister M. M. Sauer	St. Joseph's Hospital	Elgin, Ill.
Sister M. P. Dainelis	Holy Cross Hospital	Chicago, Ill.
Sister Rudolpha	St. John's Hospital	Springfield, Ill.
Sister M. T. Ettelbrick	St. Anthony de Padua Hospital	Chicago, Ill.
Scherer, Pearl***	St. Joseph's Hospital	Alton, Ill.
Schobert, Helen R.	Springfield Hospital	Springfield, Ill.
Selby, Georgiana	American Hospital	Chicago, Ill.
Shaw, Jean	Oak Park Hospital	Oak Park, Ill.
Stenstrom, Naomi S.	South Shore Hospital	Chicago, Ill.
Stuart, Linda M.	Welles Park Hospital	Chicago, Ill.
Suttle, Ethel M.	St. Francis Hospital	Macomb, Ill.
Talcott, Marie	Lincoln Hospital	Rochelle, Ill.
Teubel, Pauline E.***	P. O. Box 265	Evergreen Park, Ill.
Tyler, Dorothy	St. Luke's Hospital	Chicago, Ill.
Vincent, Nelle G.	Evanston Hospital	Evanston, Ill.
Whitford, Mae L.	Collins Clinic	Peoria, Ill.
Waller, Grace P.***	1212 N. Oak St.	Danville, Ill.
Willenborg, Anna	St. Joseph Hospital	Chicago, Ill.

INDIANA

Church, Margaret P.	1016 Garden St.	Fort Wayne, Ind.
Deane, Thelma A.***	130 West Miami Ave.	Logansport, Ind.
Efinger, Irene H.	St. Mary's Hospital	Evansville, Ind.
Gray, June***	429 E. Wayne St.	Fort Wayne, Ind.
Jacob, Martha Ann	715 Perry St.	Vincennes, Ind.
Kirschner, Regina R.	Marion General Hospital	Marion, Ind.
Lange, Agnes M.	336½ Killea Ave.	Fort Wayne, Ind.
Reitz, Helen M.	St. Mary's Hospital	Evansville, Ind.
Sister M. P. Hirt	Sacred Heart Hospital	Garrett, Ind.
Sister M. X. Morgan	Sacred Heart Hospital	Garrett, Ind.
Von der Au, Anna	2902 Fairfield Ave.	Fort Wayne, Ind.
Warnock, Inez	Moore Clinic	Muncie, Ind.
Winkjer, Olga***	St. Mary's Hospital	Evansville, Ind.

IOWA

Abraham, Sylvia	Mercy Hospital	Des Moines, Iowa
Calkins, Alena A.	Battle Creek Hospital	Battle Creek, Iowa
Edwards, Dorothy M.	Iowa Methodist Hospital	Des Moines, Iowa
Ewer, Bertha A.	401 Security Bldg.	Sioux City, Iowa
Falk, Florence C.	417 Sioux Apartments	Sioux City, Iowa
Flynn, Mary E.	St. Joseph Hospital	Sioux City, Iowa
Gath, Fanny E.	Jennie Edmundson Memorial Hospital	Council Bluffs, Iowa
Gruenwald, Louise I.	St. Joseph Hospital	Sioux City, Iowa
Haug, Camilla	Lutheran Hospital	Fort Dodge, Iowa
Hemmig, Emile		Hartley, Iowa
Kemp, Ada I.	Jennie Edmundson Hospital	Council Bluffs, Iowa
Meyer, Marian L.	St. Joseph Mercy Hospital	Mason City, Iowa

Sister M. M. Kane	St. Joseph Mercy Hospital	Sioux City, Iowa
Sister Mary Y. Jenn	St. Anthony Hospital	Carroll, Iowa
Smith, Ethel	517 High Ave., E.	Oskaloosa, Iowa
Thompson, Helen M.	212 Ankeny Bldg.	Clinton, Iowa

KANSAS

Baker, Viola H.	Wesley Hospital	Wichita, Kansas
Craig, Grace-Mary	University of Kansas Hospital	Kansas City, Kansas
Peterson, Lavida***		Miller, Kansas

KENTUCKY

Bloom, Estelle	822 Heyburn Bldg.	Louisville, Ky.
Haverkamp, Etta***	217 Van Voast Ave.	Bellevue, Ky.
Klein, Grace	Harlan Hospital	Harlan, Ky.
Salt, Susan R.	641 Park Ave.	Newport, Ky.
Smith, Tommie	1110 Francis Bldg.	Louisville, Ky.
Walcher, Dorothy E.	407 S. Main St.	Dawson Springs, Ky.

LOUISIANA

Forsman, Rosalie Marie	Hotel Dieu	New Orleans, La.
Grillet, Agnes	628 Fern St.	New Orleans, La.
Grillet, Stella	628 Fern St.	New Orleans, La.
Hamsey, Sarah A.	365 Church St.	Baton Rouge, La.
Koenig, Mary E.	Charity Hospital	New Orleans, La.
Sister Mary A. Younge	St. Francis Sanitarium	Monroe, La.
Wever, Mertice	Highland Sanitarium	Shreveport, La.

MAINE

Caruthers, Aleta H.***	Maine General Hospital	Portland, Me.
Chaney, Ardell Mareau	160 Coyle St.	Portland, Me.
Eagles, Beatrice C.	Maine Eye & Ear Infirmary	Portland, Me.
Norris, Anna V.	Woodfords Station, Box 12	Portland, Me.
Roy, Lillian B.	Maine General Hospital	Portland, Me.

MARYLAND

Argus, Clara	Johns Hopkins Hospital	Baltimore, Md.
Berger, Olive L.	Johns Hopkins Hospital	Baltimore, Md.
Black, Constance***	S. Baltimore Gen'l Hospital	Baltimore, Md.
Elliott, Ruth S.	S. Baltimore Gen'l Hospital	Baltimore, Md.
Johnson, Hazelle	Mercy Hospital	Baltimore, Md.
Mauk, Martha E.	229 Union St.	Cumberland, Md.
O'Brien, Mary J.	University Hospital	Baltimore, Md.
Sinkler, Elsie B.	Johns Hopkins Hospital	Baltimore, Md.
Smith, Grace N.	Johns Hopkins Hospital	Baltimore, Md.
South, Genevieve A.	Sinai Hospital	Baltimore, Md.
Tyler, Amelia L.	Peninsula General Hospital	Salisbury, Md.
White, Mary A.	Johns Hopkins Hospital	Baltimore, Md.
Zerhusen, Ann Louise	Apt. B-2, 1001 St. Paul St.	Baltimore, Md.

MASSACHUSETTS

Bennett, Dolly M.	Cambridge Hospital	Cambridge, Mass.
Bliss, Jessie M.	Quincy City Hospital	Quincy, Mass.
Bond, Helen L.***	Cor. Summer and Main Sts.	Tewksbury, Mass.
Crowley, Catherine E.	438 Highland Ave.	Malden, Mass.
Gerrard, Gertrude M.	Peter Bent Brigham Hospital	Boston, Mass.
Gorman, Ada Terry	c/o Boston Lying-In Hospital	Boston, Mass.
Haigwood, Hattie B.	U. S. Marine Hospital	Chelsea, Mass.
Hansbrough, Elizabeth	Station Hospital	Ft. Banks, Winthrop, Mass.
Hodgins, Agatha C.	Honorary President Nat. Ass'n Nurse Anesthestists	Chatham, Cape Cod, Mass.

Kirby, Matilda F.	St. Luke's Hospital	New Bedford. Mass.
Lewis, Dilys A.	Harrington Mem'l Hospital	Southbridge, Mass.
Macfadden, Shamah N.	Leominister Hospital	Leominster, Mass.
McDonald, Mary V.	House of Mercy Hospital	Pittsfield, Mass.
MacRae, Elizabeth F.	Peter Bent Brigham Hospital	Boston, Mass.
Mosher, Faye R.	Children's Hospital	Boston, Mass.
Sawyer, Myra L.	c/o American Board, 14 Beacon St.	Boston, Mass.
Stevens, Louise A.	219 Clark Road	Brookline, Mass.

MICHIGAN

Becker, Dora	Butterworth Hospital	Grand Rapids, Mich.
Cote, Angela B.	1298 Fourth St.	Muskegon, Mich.
Fox, Nelle***		Bronson, Mich.
French, Bessie May	Women's Hospital	Flint, Mich.
Greenway, Emma	Receiving Hospital	Detroit, Mich.
Hill, Maude	81 Franklin St.	Houghton. Mich.
Kinloch, Dorothy C.	Receiving Hospital	Detroit, Mich.
Klopfenstein, Anna S.	Sturgis Memorial Hospital	Sturgis, Mich.
Long, Florence H.	Saginaw General Hospital	Saginaw, Mich.
Martin, Mary Sturgeon	218 Ferris St.	Ypsilanti, Mich.
McEveney, Gertrude	St. Mary's Hospital	Detroit, Mich.
McKnight, Mary T.	Saginaw General Hospital	Saginaw, Mich.
McMullen, Mary	Gerber Memorial Hospital	Fremont, Mich.
Meil, Esther J.	Henry Ford Hospital	Detroit, Mich.
Perry, Mae A.	Goodrich General Hospital	Goodrich, Mich.
Sister M. C. Steffes	Borgess Hospital	Kalamazoo, Mich.
Sister Mary J. Rice.	St. Mary's Hospital	Grand Rapids, Mich.
Smith, Mary B.	Receiving Hospital	Detroit, Mich.
Stankiewicz, .H M.***	7515 Strong Ave.	Detroit, Mich.
Sturgeon, Eleanor R.	Univ. of Michigan Hospital	Ann Arbor, Mich.
Sister M. L. Tobin	St. Mary's Hospital	Grand Rapids, Mich.
Walsh, Jean A.	Providence Hospital	Detroit, Mich.
Wood, Priscilla J.	1621 Oak St.	Niles, Mich.

MINNESOTA

Anderson, Alice L.	Minneapolis General Hospital	Minneapolis, Minn.
Anderson, Palma A.	Lutheran Deaconess Hospital	Minneapolis, Minn.
Baer, Maple A.	St. John's Hospital	St. Paul, Minn.
Baggot, M. Helen	St. Mary's Hospital	Minneapolis, Minn.
Berg, Alice E.	University Hospitals	Minneapolis, Minn.
Bergman, Ruth E.	Mounds Park Hospital	St. Paul, Minn.
Brophy, Marie L.	Veterans' Hospital	Fort Snelling, Minn.
Budlong, Charlotte C.	New Asbury Hospital	Minneapolis, Minn.
Clayton, Lillian Berg	University Hospital	Minneapolis, Minn.
Cleary, Kathleen M.	St. Luke's Hospital	St. Paul, Minn.
Conlon, Theresa B.	Gillette State Hospital	St. Paul, Minn.
Goblirsch, Agnes C.	Loretto Hospital	New Ulm, Minn.
Grebstad, Borghild	Northwestern Hospital	Minneapolis, Minn.
Gronvold, J. Marie	St. Joseph's Hospital	St. Paul, Minn.
Hallberg, Caroline B.	Northwestern Hospital	Minneapolis, Minn.
Hegtvedt, Ejelive	Bethesda Hospital	St. Paul, Minn.
Hoseth, Petrine	St. Barnabas Hospital	Minneapolis, Minn.
Huntimer, W. Serena	Sutherhill, Apt. No. 3	Rochester, Minn.
Hutcheon, Mary Ethel	Winona General Hospital	Winona, Minn.
Johnson, Mabel Endora	1429 Grand Ave., Apt. No. 10	St.Paul, Minn.
Jurgensen, Katharine D.	Swedish Hospital	Minneapolis, Minn.
Kalstrom, Clarice S.	c/o C. J. Simon	New Prague, Minn.
Kippen, Janet	Asbury Hospital	Minneapolis, Minn.
Littel, L. Rose	Minneapolis Gen'l Hospital	Minneapolis, Minn.

Malloy, Catherine	Eitel Hospital	Minneapolis, Minn.
Matthews, Mildred M.	Abbott Hospital	Minneapolis, Minn.
Mirick, Grace	Miller Hospital	Duluth, Minn.
Montgomery, Ruth A.	623 Lowry Bldg.	St. Paul, Minn.
Nordquist, Anna S.	Abbott Hospital	Minneapolis, Minn.
Peterson, Hazel J.	Fairview Hospital	Minneapolis, Minn.
Petrowske, Marie	Mayo Clinic	Rochester, Minn.
Powderly, Anne Eleanor	1019 First St., N. W.	Rochester, Minn.
Pulkrabek, Sylvia F.	Minneapolis General Hospital	Minneapolis, Minn.
Risse, Mayme J.	St. John's Hospital	Red Wing, Minn.
Rothnem, Ragnhild B.	St. Lucas Hospital	Faribault, Minn.
Root, Mable G.	University Hospital	Minneapolis, Minn.
Sister C. Pepmeier	St. Lucas Deaconess Hospital	Faribault, Minn.
Slattendale, Julo A.	University Hospital	Minneapolis, Minn.
Sponheim, Mina G.	Northwestern Hospital	Minneapolis, Minn.
Tharaldson, Leah W.	1912 Clinton Ave.	Minneapolis, Minn.
Toomey, Martha M.	St. Mary's Hospital	Duluth, Minn.
Walthers, Ruth**	St. John's Hospital	St. Paul, Minn.
Westly, Grethe S.	Deaconess Hospital	Minneapolis, Minn.
Zilisch, Serena M.*	Charles T. Miller Hospital	St. Paul, Minn.

MISSISSIPPI

Allen, Lola	515 Arnold	Greenville, Miss.
Easterling, Emma	Laurel General Hospital	Laurel, Miss.
Francis, Louise	Clarksdale Hospital	Clarksdale, Miss.
Hatchett, Harriet S.	Fite Hospital	Columbus, Miss.
Mullen, Lucille	Kings Daughters' Hospital	Brookhaven, Miss.
Varnado, Maude	Laurel General Hospital	Laurel, Miss.

MISSOURI

Albers, Meta	Wash. Univ. Dental School	St. Louis, Mo.
Breitweiser, Ineze	1755 South Grand	St. Louis, Mo.
Buenger, Viola M.	1177 Tompkins St.	St. Charles, Mo.
Carr, Dorothy V.	Barnes Hospital	St. Louis, Mo.
Cole, Sylvia**	Deaconess Hospital	St. Louis, Mo.
Cox, Anna	Jewish Hospital	St. Louis, Mo.
Frein, Cecilia*	Missouri Baptist Hospital	St. Louis, Mo.
Gettinger, Anna L.	St. John's Hospital	St. Louis, Mo.
Gettinger, Rose H.	1621 Grattan	St. Louis, Mo.
Glenn, Tommie P.	St. Mary's Hospital	St. Louis, Mo.
Grupp, Doris M.	908 Beaumont Medical Bldg.	St. Louis, Mo.
Hoffman, Mary L.	De Paul Hospital	St. Louis, Mo.
Huff, Verda Kemp	16 North Monroe St.	Carrollton, Mo.
Jekel, Louisa L.	Barnes Hospital	St. Louis, Mo.
Koehler, Emma M.	Robert Koch Hospital	Koch, Mo.
Lamb, Helen	Barnes Hospital	St. Louis, Mo.
Lindsey, Jessie	4468 Forest Park Blvd.	St. Louis, Mo.
McNellis, Mary M.	Barnes Hospital	St. Louis, Mo.
Martin, Lois Webster	City Hospital No. 1	St. Louis, Mo.
Newman, Beatrice M.	St. Luke's Hospital	St. Louis, Mo.
Rhodes, Lois L.	Barnes Hospital	St. Louis, Mo.
Sister M. C. Vogel		St. Louis, Mo.
Sieg, Hattie C.	De Paul Hospital	St. Louis, Mo.
Slasor, Zelle	1600 Professional Bldg.	Kansas City, Mo.
Spleth, Frieda W.	Missouri Baptist Hospital	St. Louis, Mo.
Starbuck, Marie J.	Missouri Baptist Hospital	St. Louis, Mo.
Thompson, Edith L.	4515 Lindell Blvd.	St. Louis, Mo.

MONTANA

Crandall, Helen M.	Murray Hospital	Butte, Mont.
Graham, Helen C.	Thornton Hospital	Missoula, Mont.

Pray, Jean H.***	Deaconess Hospital	Great Falls, Mont.
Reese, Anna B.	Thornton Hospital	Missoula, Mont.
Rist, Elinor	300 10th Ave.	Havre, Mont.
Sister E. de Tivoli	St. Patrick Hospital	Missoula, Mont.
Sister Mary Fanahan	Holy Rosary Hospital	Miles City, Mont.
Sister Rachel Rausch	St. John's Hospital	Helena, Mont.
Sister Victor	St. Patrick Hospital	Missoula, Mont.
Snyder, Myrta E.	Deaconess Hospital	Glasgow, Mont.

NEBRASKA

Anderson, Marie S.	Immanuel Deaconess Hospital	Omaha, Nebr.
Anderson, Vera M.	Bryan Memorial Hospital	Lincoln, Nebr.
Berry, Comfort A.	Lutheran Hospital	Omaha, Nebr.
Brogan, Ellen	St. Elizabeth's Hospital	Lincoln, Nebr.
Bulin, Ada		Scottsbluff, Nebr.
Dorsey, Josephine J.	Nicholas Senn Hospital	Omaha, Nebr.
Hain, Agnes G.	Bishop Clarkson Hospital	Omaha, Nebr.
Owens, Mabel Reynolds	Immanuel Deaconess Hospital	Omaha, Nebr.
Sister M. Asella	St. Elizabeth Hospital	Lincoln, Nebr.
Sister M. Cresentia	St. Elizabeth Hospital	Lincoln, Nebr.
Sister Mary Ursula	St. Mary's Hospital	Nebraska City, Nebr.
Shaffer, Anna May	Nebraska M. E. Hospital	Omaha, Nebr.
Woodgate, Marie E.	109 West 7th St.	North Platte, Nebr.

NEW HAMPSHIRE

Pederson, Carin H.	New Hampshire Ml. Hospital	Concord, N. H.
Thompson, Vera L.	Margaret Pillsbury Hospital	Concord, N. H.

NEW JERSEY

Aberg, Harriet L.	Muhlenberg Hospital	Plainfield, N. J.
Bryant, Laura	Cooper Hospital	Camden, N. J.
Cummings, Marion	Franklin Hospital	Franklin, N. J.
Dangler, Jessie M.	The Dr. E. C. Hazard Hospital	Long Branch, N. J.
Dangler, Leona	The Dr. E. C. Hazard Hospital	Long Branch, N. J.
Farmer, Eliz. W.***	7 Blake Ave.	Cranford, N. J.
Gallon, Martha	State Hospital	Marlboro, N. J.
Gilmore, Phyllis	Presbyterian Hospital	Newark, N. J.
Hawk, Eleanor Reid	Newark Mem'l Hospital	Newark, N. J.
Hazen, Louise M.	St. Elizabeth Hospital	Elizabeth, N. J.
Hill, Nathalie	Middlesex Hospital	New Brunswick, N.J.
Holcombe, Emily M.	15 Washington St., Rm. 1405	Newark, N. J.
Kelly, Mary	Cooper Hospital	Camden, N. J.
Loyd, Cora Belle	Overlook Hospital	Summit, N. J.
McGarry, Helen	Memorial Hospital	Morristown, N. J.
Maunsell, Wilma	Beth Israel Hospital	Newark, N. J.
Myers, Esther	Fitkin Memorial Hospital	Neptune, N. J.
Myers, Martha M.	Eye & Ear Infirmary	Newark, N. J.
Nash, Ruth M.	Muhlenberg Hospital	Plainfield, N. J.
Patterson, Pearl C.	Dr. E. C. Hazard Hospital	Long Branch, N. J.
Rudkin, Margaret F.	Newton Memorial Hospital	Newton, N. J.
Shoemaker, Susan B.	St. James Hospital	Newark, N. J.
Stone, Mae	Presbyterian Hospital	Newark, N. J.
Strandberg, Agnes P.	94 Washington Ave.	Carteret, N. J.
Strom, Ruth E.	144 Harrison St.	East Orange, N. J.
Sutton, Alberta	201 Lyons Ave.	Newark, N. J.
Thompson, Ora E.	Elizabeth General Hospital	Elizabeth, N. J.
Welch, Dorothy M.	Somerset Hospital	Somerville, N. J.
White, Helen Fritz	R. F. D. No. 2, Box 66H	New Brunswick, N.J.

NEW YORK

Adrion, Pearl C.	152-11 89th St.	Jamaica, L. I., N. Y.
Agnew, Molly M.	149 Humber Ave.	Buffalo, N. Y.
Alber, Emma	City Hospital	Binghamton, N. Y.
Anderson, Clara E.	Brooklyn Hospital	Brooklyn, N. Y.
Arent, Madeleine	Lawrence Hospital	Bronxville, N. Y.
Armstrong, Ethel	Cumberland Hospital	Brooklyn, N. Y.
Baird, Lyma	Kings County Hospital	Brooklyn, N. Y.
Beam, Henrietta May	147-37 Beech Ave.	Flushing, L. I., N. Y.
Bean, Verna E.	St. John's Hospital	Brooklyn, N. Y.
Bieber, Clara G.	Woman's Hospital	New York, N. Y.
Billmeyer, Hancie M.	Wyckoff Heights Hospital	Brooklyn, N. Y.
Blade, Caroline E.	4802 10th Ave.	Brooklyn, N. Y.
Blanchard, Hazel**	1910 Seventh Ave.	Troy, N. Y.
Bush, Genevieve C.***	Albany Hospital	Albany, N. Y.
Calder, Dorothy N.	Yonkers General Hospital	Yonkers, N. Y.
Clode, Mary	Beekman Street Hospital	New York, N. Y.
Clough, Dorothy	Post-Graduate Hospital	New York, N. Y.
Colleran, Emma A.	Ellis Hospital	Schenectady, N. Y.
Collins, Agnes G.	1320 York Ave.	New York, N. Y.
Conway, Helen A.	Flushing Hospital	Flushing, N. Y.
Cook, Kate	174 Main St.	Akron, N. Y.
Cook, Mildred	Coney Island Hospital	Brooklyn, N. Y.
Craven, Helen K.	City Hospital, Welfare Island	New York, N. Y.
Cullen, Catherine C.	Arnot-Ogden Mem'l Hospital	Elmira, N. Y.
Danzeisen, Estelle I.	Brunswick Hospital	Amityville, N. Y.
DeBaun, Faith	Hudson City Hospital	Hudson, N. Y.
de Felice, Josephine	Kings County Hospital	Brooklyn, N. Y.
de Noyelles, Mae Heath	St. John's Riverside Hospital	Yonkers, N. Y.
Dickson, Eva M.	Brooklyn Hospital	Brooklyn, N. Y.
Dobbie, Marie P.	63 N. Hampton St.	Buffalo, N. Y.
Donaher, May G.	Medical Arts Bldg.	Schenectady, N. Y.
Doran, Irene	Shelton Hotel	New York, N. Y.
Dunst, Elizabeth	Samaritan Hospital	Brooklyn, N. Y.
Edwards, Ida Maude*	Strong Memorial Hospital	Rochester, N. Y.
Edwards, Pauline***	1296 Pacific St.	Brooklyn, N. Y.
Elzer, Josephine	French Hospital	New York, N. Y.
Fields, Lillian E.	Jewish Hospital	Brooklyn, N. Y.
Fink, Louise R.	311 E. 72nd St.	New York, N. Y.
FitzGerald, Sarah L.	St. Mary's Hospital	Rochester, N. Y.
Fitzpatrick, M. S.	Mary McClellan Hospital	Cambridge, N. Y.
Fowler, Sophie K.	400 Clinton Ave.	Brooklyn, N. Y.
Foy, Cora Lee	Manhattan Eye, Ear & Throat Hospital	New York, N. Y.
Franke, Elsa E.	613 State St.	Schenectady, N. Y.
Gardner, Reba H.	Mt. Sinai Hospital	New York, N. Y.
Geiss, Helen M.	Strong Memorial Hospital	Rochester, N. Y.
Glenz, Muriel M.	Minor Surg. Nursing Service	Hempstead, L.I., N.Y.
Graham, Ada Mary***	Methodist Episcopal Hospital	Brooklyn, N. Y.
Haubennestel, Ruth	Vassar Bros. Hospital	Poughkeepsie, N. Y.
Hannock, Ruth S.	363 State St.	Albany, N. Y.
Hedling, Frieda K.	Beth-El Hospital	Brooklyn, N. Y.
Heinz, Martha C.***	Grasslands Hospital	Valhalla, N. Y.
Henneberger, Martha M.	Woman's Hospital	New York, N. Y.
Hess, Frances	Long Island College Hospital	Brooklyn, N. Y.
Hughes, Grace Gordon	Woman's Hospital	New York, N. Y.
Hume, Margaret E.	Brooklyn Hospital	Brooklyn, N. Y.
Hunt, Christine M.	St. Mary's Hospital	Brooklyn, N. Y.
Jennings, Gertrude M.	New Rochelle Hospital	New Rochelle, N. Y.
John, Grace M.	Cornell Medical Center	New York, N. Y.

Johnston, Maude	246 Ovington Ave.	Brooklyn, N. Y.
Jones, Marion***	201 West Beard Ave.	Syracuse, N. Y.
Kane, Ethel M.	Strong Memorial Hospital	Rochester, N. Y.
Keller, Bessie M.	Cumberland Hospital	Brooklyn, N. Y.
Kingman, Katherine***	Albany Hospital	Albany, N. Y. [N.Y.
Korenik, Boldiena A.	134-09 89th Ave.	Richmond Hill, L. I.,
Krieger, Bessie L.	103 Hooker Ave.	Poughkeepsie, N. Y.
Kuhn, Charlotte	Crown Heights Hospital	Brooklyn, N. Y.
Lang, Veronica E.	St. Catherine's Hospital	Brooklyn, N. Y.
Lemke, Anna C.	Woman's Hospital	New York, N. Y.
Lindberg, Gladys L.	Staten Island Hospital	Staten Island, N. Y.
Lipinski, Bernice	Strong Memorial Hospital	Rochester, N. Y.
Lynch, Eunice	Mather Hospital	Port Jefferson, N. Y.
McCoy, Charlotte	1320 York Ave.	New York, N. Y.
McFadden, Dessie	1320 York Ave.	New York, N. Y.
McKay, Cora	Albany Hospital	Albany, N. Y.
McMullen, Julia	Ellis Hospital	Schenectady, N. Y.
McQuilton, Ida Mae	Nassau Hospital	Mineola, L. I., N. Y.
MacEachron, Doris, H.	Albany Hospital	Albany, N. Y.
MacIver, Kathryn M.	Bay Ridge Sanitarium	Brooklyn. N. Y.
Martin, Evangeline M.	Woman's Hospital	New York, N. Y.
Mavor, Mary E.	N .Y. Orthopedic Hospital	New York, N. Y.
Meek, Mary A.	1255 Delaware Ave.	Buffalo, N. Y.
Millington, Edna F.	Methodist Episcopal Hospital	Brooklyn, N. Y.
Mitarnowski, L. A.***	Kings County Hospital	Brooklyn, N. Y.
Moore, Greta	N. Y. Orthopedic Hospital	New York, N. Y.
Morrow, Dorothy H.	Highland Hospital	Rochester, N. Y.
Moss, Naomi S.	Wyckoff Heights Hospital	Brooklyn, N. Y.
Mullin, Sara R.	N. Y. Hospital, Cornell Clinic	New York, N. Y.
Murphy, Anna D.	Ellis Hospital	Schenectady, N. Y.
O'Connor, Inez E.	Olean General Hospital	Olean, N. Y.
Penland, Anne	Presbyterian Hospital	New York, N. Y.
Perry, Mary F.	309 E. 49th St.	New York, N. Y.
Plumb, Elizabeth R.	City Hospital, Welfare Island	New York, N. Y.
Prentice, Mildred V.	Bethany Deaconess Hospital	Brooklyn, N. Y.
Putnum, Helen F.	31 E. 60th St.	New York, N. Y. [Y.
Rabinowitz, Frances	Staten Island Hospital	Tomkinsville, S.I., N
Racette, Alice M.	Ellis Hospital	Schenectady, N. Y.
Reusch, Edith Marion	Reconstruction Unit	New York, N. Y.
Rice, Lillian A.	39 Palmer Ave., Box 216	Bronxville, N. Y.
Riebhoff, Grace H.	Freeport Hospital	Freeport, L. I., N. Y.
Roach, Evelyn	1320 York Ave.	New York, N. Y.
Robinson, Helen B.	Queen's General Hospital	Jamaica, L. I., N. Y.
Rozek, Adeline F.	Beth David Hospital	New York, N. Y.
Runge, Isabelle	1143 Regent St.	Schenectady, N. Y.
Russell, Jessie G.***	567 Prospect Place	Brooklyn, N. Y.
Sister Mary Berchmans	Mt. St. Mary's Hospital	Niagara Falls, N. Y.
Sister M. Inez O'Mailia	Mercy Hospital	Buffalo, N. Y.
Satterlee, Charlotte D.	Memorial Hospital	Albany, N. Y.
Savage, Anne	Brooklyn Hospital	Brooklyn, N. Y.
Schoch, Icie A.	United Hospital	Port Chester, N. Y.
Schmid, Carol	880 Lafayette Ave.	Buffalo, N. Y.
Schmidt, Lucy Lee	Fifth Ave. Hospital	New York, N. Y.
Secrest, Clara M.	Leonard Hospital	Troy, N. Y.
Short, Augusta Lee		Governor's Is., N. Y.
Shupp, Miriam G.	Strong Memorial Hospital	Rochester, N. Y.
Silverman, Helen E.	70 Remsen St., Apt. 10D	Brooklyn, N. Y.
Smith, Caroline B.	Vassar Bros. Hospital	Poughkeepsie, N. Y.
Spongberg, Alice J.	Bay Ridge Sanitarium	Brooklyn, N. Y.
Starchak, Mary	Brooklyn Hospital	Brooklyn, N. Y.

Steffen, Gertrude	Long Island College Hospital	Brooklyn, N. Y.
Stewart, Anna E.	Manhattan Eye, Ear & Throat Hospital	New York, N. Y.
Suhihoff, Marian A.	Midwood Sanitarium	Brooklyn, N. Y.
Sutliff, Dorothy S.	Mary Imogene Bassett Hospital	Cooperstown, N. Y.
Tippit, Clyde D.	5 East 98th St.	New York, N. Y.
Tschudin, Marie	Vassar Bros. Hospital	Poughkeepsie, N. Y.
von Bockum-Dolffs, I.	Hospital for Ruptured & Crippled	New York, N. Y.
Vornholt, Anna L.	Manhattan Eye, Ear & Throat Hospital	New York, N. Y.
Ward, Gladys	Jewish Hospital	Brooklyn, N. Y.
Weaver, R. Edith	Hudson City Hospital	Hudson, N. Y.
Weisensee, Barbara	Minor Sur. Nursing Service	Hempstead, L.I.,N.Y.
Whitman, Georgia	89-06 163rd St.	Jamaica, N. Y.
Wire, Charlotte	Kings County Hospital	Brooklyn, N. Y.
Wright, Anne M.	Nassau Hospital	Mineola, L. I., N. Y.
Wright, Regina	506 6th St.	Brooklyn, N. Y.
Wurtz, Clara A.	200 Wallace Ave.	Buffalo, N. Y.
Ziegler, Martha T.	Kings County Hospital	Brooklyn, N. Y.

NORTH CAROLINA

Baird, Ida L.	Highsmith Hospital	Fayetteville, N. C.
Derbyshire, Daisy W.	Mary Elizabeth Hospital	Raleigh, N. C.
Derrick, Ora	James Walker Mem'l Hospital	Wilmington, N. C.
Goodman, Eliza D.	Duke University Hospital	Durham, N. C.
Fleming, Maude M.		Middleburg, N. C.
Hardin, Mary S.		Shelby, N. C.
Henley, Jamie	1-A Guthery Apt.	Charlotte, N. C.
Knight, Edna	Rex Hospital	Raleigh, N. C.
Muller, Mary H.	Duke University Hospital	Durham, N. C.
Sellars, Bessie L.	416 Front St.	Burlington, N. C.
Snively, Mary H.	Duke University Hospital	Durham, N. C.
Trent, Frances L.	N. C. Orthopedic Hospital	Gastonia, N. C.

NORTH DAKOTA

Ammentorp, Magna	Deaconess Hospital	Grand Forks, N. D.
Engen, Christine G.	Trinity Hospital	Minot, N. D.
Lyngstad, Charlotte	Quain & Ramstad Clinic	Bismarck, N. D.
Sister G. Delmore	St. John's Hospital	Fargo, N. D.
Sogaard, Gertrude	St. Luke's Hospital	Fargo, N. D.

OHIO

Adams, Lou E.	Cleveland Clinic Hospital	Cleveland, Ohio
Allison, Mary	University Hospitals	Cleveland, Ohio
Allwein, Aida B.	Mount Sinai Hospital	Cleveland, Ohio
Auble, Mada C.	1613 Home Savings & Loan Bldg.	Youngstown, Ohio
Barth, Alice L.	Youngstown Hospital Ass'n, N. S. Unit	Youngstown, Ohio
Beros, Anna E.***	Cor. 4th & Belmont Sts.	Toronto, Ohio
Blue, Margaret E.	Maternity Hospital	Cleveland, Ohio
Bolton, Gladys M.	Akron City Hospital	Akron, Ohio
Boswell, Florence H.	1334 Inglewood Drive	Cleveland Ohio
Burlage, Katherine G.	660 Johnson Ave.	Bedford, Ohio
Butler, Naomi	Cincinnati General Hospital	Cincinnati, Ohio
Callot, Henriette May	2559 Princeton Blvd.	Cleveland, Ohio
Campbell, Violet	St. Elizabeth's Hospital	Youngstown, Ohio
Carney, Helen U.	Youngstown Hospital, N. S.	Youngstown, Ohio
Case, Loretta***	1886 E. 93rd St., Apt. 26	Cleveland, Ohio

Cleaver, Kathryn E.	Fairview Park Hospital	Cleveland, Ohio
Correll, Marion A.	Children's Hospital	Cincinnati, Ohio
Coughlin, Johanna M.	Good Samaritan Hospital	Dayton, Ohio
Crauder, Dona	107 Stockton Ave.	Dayton, Ohio
Dingledine, Margaret	325 North Robert Blvd.	Dayton, Ohio
Duggar, Charlotte	Maternity Hospital	Cleveland, Ohio
Duncan, Davida G.***	419 Pearl St.	Wooster, Ohio
Eshem, Nancy V.	Bethesda Hospital	Cincinnati, Ohio
Fife, Gertrude L.	University Hospitals Honorary member Ohio Ass'n	Cleveland, Ohio
Goodman, Mary Lucile	University Hospitals	Cleveland, Ohio
Graff, Ruth	St. Ann's Hospital	Cleveland, Ohio
Gruler, Imelda M.	Good Samaritan Hospital	Cincinnati, Ohio
Hale, Dessa C.	Hale Hospital	Wilmington, Ohio
Hollister, Marian**	Maternity Hospital	Cleveland, Ohio
Houghland, Lillian P.	1932 E. 97th St.	Cleveland, Ohio
James, Mary M.	331 E. Main St.	Lebanon, Ohio
Kaiser, Emilie	University Hospital	Columbus, Ohio
Lemke, Evelyn	Christ Hospital	Cincinnati, Ohio
Lupher, Margaret J.***	148 N. Main St.	Utica, Ohio
McCarthy, Dorothy	University Hospitals	Cleveland, Ohio
McDade, Mary A.	507 Alliance Bank Bldg.	Alliance, Ohio
McFadden, Irene	City Hospital	Cleveland, Ohio
McGilliard, Dorothy	223 N. Cooper Ave.	Lockland, Ohio
Momeyer, Myrn E.	St. Luke's Hospital	Cleveland, Ohio
Moore, Rae E.	Akron City Hospital	Akron, Ohio
Morgan, Martha A.	St. Ann's Hospital	Cleveland, Ohio
Murray, Edna M.	Women's & Children's Hospital	Toledo, Ohio
Nightengale, Ann M.	Lutheran Hospital	Cleveland, Ohio
Parker, Daisy A.	Youngstown City Hospital, S. S. Unit	Youngstown, Ohio
Parrish, Elizabeth A.***	1322 Plum St.	Steubenville, Ohio
Pfeifer, Christine K.	Children's Hospital	Columbus, Ohio
Pfisterer, Dorothy	White Cross Hospital	Columbus, Ohio
Rathweg, Mary R.	2532 Ravenwood Ave.	Dayton, Ohio
Richards, Lucy E.	City Hospital	Cleveland, Ohio
Ring, Margaret A.	4229 Pearl Road	Cleveland, Ohio
Rothansky, Anna M.	Akron City Hospital	Akron, Ohio
Sister M. B. Leahy	Mercy Hospital	Hamilton, Ohio
Sister M. C. McLaughlin	St. Thomas Hospital	Akron, Ohio
Sister John E. Kaiser	Good Samaritan Hospital	Dayton, Ohio
Sister M. John Halter	Mercy Hospital	Canton, Ohio
Sister M. M. Regan	Good Samaritan Hospital	Cincinnati, Ohio
Sauers, Mildred	City Hospital	Cleveland, Ohio
Schmidt, Dora	Maternity Hospital	Cleveland, Ohio
Sloat, Mildred R.	Ohio Valley Hospital	Steubenville, Ohio
Sutton, Bessie	City Hospital	Cleveland, Ohio
Sweet, Marjorie	University Hospitals	Cleveland, Ohio
Tice, Pauline	Good Samaritan Hospital	Cincinnati, Ohio
Van Arsdale, Myra	St. Luke's Hospital	Cleveland, Ohio
Venn, Anna D.	Christ Hospital	Cincinnati, Ohio
Walker, Marjory H.	Mt. Sinai Hospital	Cleveland, Ohio
Walters, Martha	Mt. Sinai Hospital	Cleveland, Ohio
Ware, M. A. Wildermuth	Children's Hospital, Life Member Nat'l Ass'n	Cincinnati, Ohio
Wass, Agnes A.	Woman's Hospital	Cleveland, Ohio
Wertz, E. Ruth	Good Samaritan Hospital	Cincinnati, Ohio
Woodford, Frances A.	St. Luke's Hospital	Cleveland, Ohio
Yoskey, Julia A.	Mt. Carmel Hospital	Columbus, Ohio
Zieber, Ida Mae	St. Luke's Hospital	Cleveland, Ohio

OKLAHOMA

Egan, Pierina G.	Wewoka Hospital	Wewoka, Okla.
Glass, Lela***	1444 N. W. 39th	Oklahoma C'y, Okla.
Williams, Bernice E.	1428 W. Main St.	Durant, Okla.

OREGON

Amort, Alvine	1312 Mill St.	Eugene, Ore.
Bunch, Josephine B.	117 N. W. Trinity Place	Portland, Ore.
Butler, Hazel	2166 N. W. Irving St.	Portland, Ore.
Byford, Jeannette	Good Samaritan Hospital	Portland, Ore.
Caraway, Olga L.	R. 6, Box 772½	Portland, Ore.
Cudmore, L. Mabel	Klamath Valley Hospital	Klamath Valley, Ore.
Darby, Merwyn	St. Andrew's Hotel	Portland, Ore.
Darrington, Marie	217 E. 11th St.	Eugene, Ore.
Dempsey, Anne	2062 N. W. Marshall St.	Portland, Ore.
Dimig, Mary K.	2800 N. Commercial Ave.	Portland, Ore.
Doerr, Aimee L.*	Multnomah Hospital	Portland, Ore.
Dougherty, Helen	2475 N. W. Westover Road	Portland, Ore.
Dow, Jean Edna	1908 E. Burnside St.	Portland, Ore.
Duruo, Evelyn B.	1913 Hilcrest Road	Medford, Ore.
Earhart, June	Route 4	Medford, Ore.
Feser, Anne	Medical Dental Surgery	Portland, Ore.
Fife, Marie	164 Hawthorn Ave.	Bend, Ore.
Flynn, Laura***	821 S. E. Bush St.	Portland, Ore.
Gammon, Edna C.	U. S. National Bank Bldg.	The Dalles, Ore.
Giddings, Margret	617 Medical Arts Bldg.	Portland, Ore.
Gonier, Alice F.	916 Journal Bldg.	Portland, Ore.
Goulet, Minnie	2207 Harris St.	Eugene, Ore.
Hackett, Faye W.	Good Samaritan Hospital	Portland, Ore.
Harris, Louise	6325 S. E. Morrison St.	Portland, Ore.
Haug, Emma	2800 N. Commercial Ave.	Portland, Ore.
Herin, Miriel	Emanuel Hospital	Portland, Ore.
Hollenbeck, Alta	Good Samaritan Hospital	Portland, Ore.
Hynson, Gene	The Dalles Hospital	The Dalles, Ore.
Johnson, Elizabeth D.	2005 28th St.	Milwaukie, Ore.
McCorkle, Clara	2055 N. W. Lovejoy St.	Portland, Ore.
McDonald, Lillian M.	Salem General Hospital	Salem, Ore.
McElligott, Mabel	4705 N. E. Mallory Ave.	Portland, Ore.
McGee, Agnes	2328 N. W. Everett St.	Portland, Ore.
Maher, Bernice**	2475 N. W. Westover Road	Portland, Ore.
Morse, Cecile L.	Mid-Columbia Hospital	The Dalles, Ore.
Nowels, Mrs. Neale	703 Cottage St.	Salem, Ore.
Pobochenko, Ruth	6415 S. E. Morrison St.	Portland, Ore.
Sister A. de Boheme	St. Vincent's Hospital	Portland, Ore.
Sister L. Anthime***	St. Vincent's Hospital	Portland, Ore.
Sister Ottilia	St. Mary's Hospital	Astoria, Ore.
Swearingen, Phyllis	Community Hospital	Medford, Ore.
Vermullen, Angela	2475 N. W. Westover Road	Portland, Ore.
Wilhelm, Hazel I.***	3424 N. E. Tillamook St.	Portland, Ore.
Wilkes, Vernie M.	Columbia Hospital	Astoria, Ore.
Williams, Mary D.	St. Charles Hospital	Bend, Ore.
Wilmot, Katurah M.	2026 S. E. Elliott Ave.	Portland, Ore.

PENNSYLVANIA

Abary, Edith E.	Harrisburg Hospital	Harrisburg, Pa.
Anderson, Maude	Elk Co. General Hospital	Ridgway, Pa.
Arnold, Dorothy	Indiana Memorial Hospital	Indiana, Pa.
Barie, Elfreda	St. John's Hospital, N. S.	Pittsburgh, Pa
Baker, Alma G.	Miner's Hospital	Spangler, Pa.
Barratt, May E.	Hahnemann Hospital	Scranton, Pa.

Blum, Mildred M.	Altoona Hospital	Altoona, Pa.
Borgstrom, Hilma C.	Stetson Hospital	Philadelphia, Pa.
Bowkley, Naomi E.	Wyoming Valley Homeopathic Hospital	Wilkes-Barre, Pa.
Breaky, Nettie		Brookville, Pa.
Byers, Gertrude S.	Eye & Ear Hospital	Pittsburgh, Pa.
Cadwallader, M. F.***	247 So. Juniper St.	Philadelphia, Pa.
Campbell, Clara B.	637 Walnut St.	McKeesport, Pa.
Carpenter, Lena	General Hospital	Wilkes-Barre, Pa.
Cavan, Matilda G.	Mercy Hospital	Wilkes-Barre, Pa.
Cole, Sylvia A.	Jefferson Hospital	Philadelphia, Pa.
Cool, Mary E.	West Penn Hospital	Pittsburgh, Pa.
Costello, Ella T.	Women's Homeopathic Hosp.	Philadelphia, Pa.
Davies, Marian	Moses Taylor Hospital	Scranton, Pa.
Davis, Edith	Allentown Hospital	Allentown, Pa.
Davis, Elizabeth F.	South Side Hospital	Pittsburgh, Pa.
Davis, Hester V. P.	Germantown Hospital	Philadelphia, Pa.
Degutis, Margaret M.	Pottsville State Hospital	Pottsville, Pa.
Dibert, Helen L.	Kane Community Hospital	Kane, Pa.
DeLone, Florence A.	1700 Green St.	Harrisburg, Pa.
Donovan, Rose G.**	Mt. Sinai Hospital	Philadelphia, Pa.
Dougan, Janet B.	Hamot Hospital	Erie, Pa.
Dougherty, Donna D.	206 Willow St.	Camp Hill, Pa.
Emerick, Ida McK.	Rochester General Hospital	Rochester, Pa.
Fischler, Dorothy F.	Robert Packer Hospital	Sayre, Pa.
Foote, Belle R.	Robert Packer Hospital	Sayre, Pa.
Foster, Anne B.	Citizens General Hospital	New Kensington, Pa.
Foy, Catherine	St. Joseph's Hospital	Carbondale, Pa.
Freese, Elsa	5214 North 3rd St.	Philadelphia,Pa.
Fulton, Faye L.	Methodist Episcopal Hospital	Philadelphia,Pa.
Furlong, Mae L.		Mahanoy Plane, Pa.
Gallagher, Marie C.	697 Mansion St.	Bristol, Pa.
Giffen, Margaret M.	Valley Hospital	Sewickley, Pa.
Gilmore, Ruth S.	Butler Co. Mem'l Hospital	Butler, Pa.
Goemer, Miriam F.	Jefferson Hospital	Philadelphia, Pa.
Goff, Anne C.	Univ. of Penn. Hospital	Philadelphia, Pa.
Grant, Anna Katherine	Comemaugh Valley Hospital	Johnstown, Pa.
Haberstroh, Ruth C.	Mercy Hospital	Altoona, Pa.
Hagenbach, Beatrice	Maple Avenue Hospital	DuBois, Pa.
Haines, Alverta K.	Altoona Hospital	Altoona, Pa.
Hartenstein, Jessie M.	4534 Osage Ave.	Philadelphia, Pa.
Hendricks, Martha L.	West Side Hospital	Scranton, Pa.
Hitz, Leta A.	Reading Hospital	Reading, Pa.
Houck, Edna I.	Philipsburg State Hospital	Philipsburg, Pa.
Hough, Loretta A.	Westmoreland Hospital	Greensburg, Pa.
Hunter, Bessie F.	Mt. Sinai Hospital	Philadelphia, Pa.
Ingram, Nancy	Philadelphia General Hospital	Philadelphia, Pa.
Jenkins, Anna T.	State Hospital	Ashland, Pa.
Jenne, Mary A.	Reading Hospital	Reading, Pa.
Johnston, Naomi A.	Methodist Episcopal Hospital	Philadelphia, Pa.
Jones, Agnes M.	Braddock General Hospital	Braddock, Pa.
Jones, Katherine	Magee Hospital	Pittsburgh, Pa.
Karns, Irene	McKeesport Hospital	McKeesport, Pa.
Kauffman, A. Isabelle	Lancaster General Hospital	Lancaster, Pa.
Keebler, Sarah S.	Jeanes Hospital, Fox Chase	Philadelphia, Pa.
Kenney, Ellen E.	Connellsville State Hospital	Connellsville, Pa.
King, Madeleine M.	848 Park Ave.	Meadville, Pa.
Kissell, Esther M.	Harrisburg Hospital	Harrisburg, Pa.
Knipper, Margaret E.	St. Joseph's Hospital	Philadelphia, Pa.
Kolker, Bessye R.	Mt. Sinai Hospital	Philadelphia, Pa.

Kramlich, R. Margaret	3804 Chestnut St.	Philadelphia, Pa.
Krause, Helen C.	Temple University Hospital	Philadelphia, Pa.
Lambert, Marcella F.	St. Vincent's Hospital	Erie, Pa.
Laurence, Beatrix M.	Bradford Hospital	Bradford, Pa.
Leidy, Albertine R.	6251 Wister St., Germantown	Philadelphia, Pa.
Lewis, Rhoda	General Hospital	Wilkes-Barre, Pa.
Ligon, Maurine	126 So. 40th St.	Philadelphia, Pa.
Lockwood, Jennie M.	St. Joseph's Hospital	Philadelphia, Pa.
Logan, Della	Delaware County Hospital	Drexel Hill, Pa.
McBride, Mary A.	Taylor Hospital	Ridley Park, Pa.
McGeary, Mary V.	St. Mary's Hospital	Philadelphia, Pa.
McKean, Bertha Pingel	Passavant Hospital	Pittsburgh, Pa.
McLaughlin, Ellenor	Oil City Hospital	Oil City, Pa.
McLaughlin, Lucille C.	Warren General Hospital	Warren, Pa.
McTurk, Theresa A.	Metropolitan Hospital	Philadelphia, Pa.
MacCullough, Sylvia I.	Jewish Hospital	Philadelphia, Pa.
Machusak, Anne	Polyclinic Hospital	Harrisburg, Pa.
MacNeil, Lillian F.	St. Christopher & Children's Hospital	Philadelphia, Pa.
Maguire, Mary A.	Gorgas Court, Apt. 107	Gorgas Lane, Pa.
Maguire, Sarah A.	Franklin Hospital	Franklin, Pa.
Mayer, Amelia	Homeopathic Hospital	Pittsburgh, Pa.
Meszaros, Rose	Temple University Hospital	Philadelphia, Pa.
Miller, Anna J.	5506 5th Ave.	Pittsburgh, Pa.
Miller, Marjorie M.	State Hospital	Blossburg, Pa.
Miller, Mary E.	York Hospital	York, Pa.
Miller, Zella C.	Jameson Memorial Hospital	New Castle, Pa.
Moore, Clara R.	Adrian Hospital	Punxsutawney, Pa.
Nelsen, Camilla M.	Indiana Hospital	Indiana, Pa.
Nelson, Anna C.	Abington Memorial Hospital	Abington, Pa.
Nelson, Thelma	Geisinger Memorial Hospital	Danville, Pa.
Newton, Mary Margaret	Keystone Hotel	Pittsburgh, Pa.
Oaks, Isabelle	Jefferson Hospital	Philadelphia, Pa.
Oberholtzer, Irene S.	Pottstown Hospital	Pottstown, Pa.
O'Harra, Marian	Lewistown Hospital	Lewistown, Pa.
Page, Julia E.	Chester Co. Hospital	West Chester, Pa.
Palmer, Elsie M.	Children's Hospital	Pittsburgh, Pa.
Payne, Edith D.	Univ. of Penna. Hospital	Philadelphia, Pa.
Perry, Helen	Allegheny General Hospital	Pittsburgh, Pa.
Pflieger, Bregetta F.	Mercy Hospital	Johnstown, Pa.
Plowman, Katherine A.	Harrisburg Hospital	Harrisburg, Pa.
Pnellie, Lena M.		Dagus Mines, Pa.
Ponesmith, John E.	York Hospital	York, Pa.
Powell, Dora E.	Taylor Hospital	Ridley Park, Pa.
Puett, Martha	242 South Highland Ave.	Pittsburgh, Pa.
Rapp, Elizabeth	Lankenau Hospital	Philadelphia, Pa.
Rau, Mary M.	Shelby Hospital	Ellwood City, Pa.
Ray, Mary M.	Andrew Kaul Mem'l Hospital	St. Mary's, Pa.
Reigel, Ruth A.	Frankford Hospital	Philadelphia, Pa.
Render, Gertrude	Homestead Hospital	Homestead, Pa.
Richter, Leola M.	Presbyterian Hospital	Pittsburgh, Pa.
Ritzert, Mildred	Eye and Ear Hospital	Pittsburgh, Pa.
Robinson, Marian L.*	Pennsylvania Hospital	Philadelphia, Pa.
Roenbaugh, Mary A.	West Penn Hospital	Pittsburgh, Pa.
Rose, Marie Sophie	St. Margaret Mem'l Hospital	Pittsburgh, Pa.
Rougeux, Margaret C.	Nanticoke State Hospital	Nanticoke, Pa.
Sister M. Alacoque	St. Joseph's Hospital	Pittsburgh, Pa.
Sister M. A. Wagner	St. Vincent's Hospital	Erie, Pa.
Sister M. Grace King	Mercy Hospital	Johnstown, Pa.
Sister M. Irma Gatens	Fitzgerald-Mercy Hospital	Darby, Pa.

Sister M. Jude McCall	Providence Hospital	Beaver Falls, Pa.
Sister M. Ludgeris***	A. C. Milliken Hospital	Pottsville, Pa.
Sister M. M. McMahon	Pittsburgh Hospital	Pittsburgh, Pa.
Sister M. Pulcheria	A. C. Milliken Hospital	Pottsville, Pa.
Salomon, Hilda R.	Jewish Hospital	Philadelphia, Pa.
Sayers, Elizabeth O.	Homeopathic Hospital	Pittsburgh, Pa.
Schramm, Naomi M.***	1621 4th St.	New Brighton, Pa.
Schriver, Katherine K.	Memorial Hospital	New Eagle, Pa.
Schwab, Florence	Temple University Hospital	Philadelphia, Pa.
Scott, Lora E.	Robert Packer Hospital	Sayre, Pa.
Shellenberger, F. V.	Montefiore Hospital	Pittsburgh, Pa.
Sherman, Martha C.	530 Locust St.	McKeesport, Pa.
Sismondo, Josephine***	242 3rd St.	California, Pa.
Sisson, Daisy	St. Luke's Hospital	Bethlehem, Pa.
Smarr, Sally O.	Episcopal Hospital	Philadelphia, Pa.
Smiser, Elizabeth S.	Chestnut Hill Hospital	Philadelphia, Pa.
Smith, Alice C.	Delaware County Hospital	Drexel Hill, Pa.
Sprecher, Esther M.	Homeopathic Hospital	Reading, Pa.
Stewart, Ida	Titusville Hospital	Titusville, Pa.
Stringer, Esther M.	269 South 19th St.	Philadelphia, Pa.
Sullivan, Olive W.	Miners Hospital	Spangler, Pa.
Sybert, Jennie M.	State Hospital	Connellsville, Pa.
Taglieber, Mabel	736 Haws Ave.	Norristown, Pa.
Tamm, Helene	Elizabeth Steel Magee Hosp.	Pittsburgh, Pa.
Tash, Kathryn L.	Abington Hospital	Abington, Pa.
Thomas, Anna	Wilkes-Barre Gen. Hospital	Wilkes-Barre, Pa.
Thomas, Sara S.	129 E. Edison Ave.	New Castle, Pa.
Ulshafer, Nellie	State Hospital	Hazleton, Pa.
Unks, Margaret C.	Mercy Hospital	Pittsburgh, Pa.
Valentine, Rose M.	St. Joseph's Hospital	Lancaster, Pa.
VanderBurgh, G. G.	Williamsport Hospital	Williamsport, Pa.
Viehmann, Margaret	Misericordia Hospital	Philadelphia, Pa.
Vogel, Adelinda A.	223 Grant Ave.	Millvale, Pa.
Wagner, Florence E.	Pennsylvania Hospital	Philadelphia, Pa.
Walker, Helen Young	1824 Wallace St.	Philadelphia, Pa.
Walton, Mary E.	Mercy Hospital	Pittsburgh, Pa.
Wandell, Eloise P.	Nesbitt Memorial Hospital	Kingston, Pa.
Weber, Lillian	Montefiore Hospital	Pittsburgh, Pa.
Weidman, Beatrice A.	Bryn Mawr Hospital	Bryn Mawr, Pa.
West, Louise	Abington Memorial Hospital	Abington, Pa.
Westbrook, Edith	Episcopal Hospital	Philadelphia, Pa.
Whisler, Edna M.	University of Penn. Hospital	Philadelphia, Pa.
White, Isabelle W.***	Wyoming Valley Homeopathic Hospital	Wilkes-Barre, Pa.
Whitman, Irene	Frankford Hospital	Philadelphia, Pa.
Williams, Grace	Allegheny General Hospital	Pittsburgh, Pa.
Wright, Dorothy E.	Mt. Sinai Hospital	Philadelphia, Pa.
Wright, Grace B.	Beaver Valley Gen'l Hospital	New Brighton, Pa.
Yerger, Margaretta S.	505 Palmer Ave.	Patton, Pa.
Yocum, Florence M.	365 Mt. Vernon St.	Lansdale, Pa.
Young, Isidora M.	Mercy Hospital	Pittsburgh, Pa.
Zeiser, Katherine	94 Pine St.	Lewistown, Pa.

SOUTH CAROLINA

Davies, Eliza H.	Roper Hospital	Charleston, S. C.
Donnan, Jane	1430 Marion St.	Columbia, S. C.
Meyer, Annie J.	279 Meeting St.	Charleston, S. C.
O'Leary, Glena B.	Roper Hospital	Charleston, S. C.
Power, Ethel H.	Roper Hospital	Charleston, S. C.

SOUTH DAKOTA

Daulton, Adelyn***	McKennan Hospital	Sioux Falls, S. Dak.
Reagan, Genevieve	Sioux Valley Hospital	Sioux Falls, S. Dak.
Sister M. A. McDonnell	Our Lady of Lourdes Hospital	Hot Springs, S. Dak.
Sister M. C. Shealy	McKennan Hospital	Sioux Falls, S. Dak.
Sister M. Celine	St. Luke's Hospital	Aberdeen, S. Dak.
Sister M. Cornelia	St. Luke's Hospital	Aberdeen, S. Dak.
Sister M. E. Seman	St. John's Hospital	Rapid City, S. Dak.
Sister M. Eulalia	St. Joseph's Hospital	Mitchell, S. Dak.
Sister M. Irmina	St. Joseph's Hospital	Deadwood, S. Dak.
Sister M. L. Schendt	Our Lady of Lourdes Hospital	Hot Springs, S. Dak.
Sister M. Luke	St. Luke's Hospital	Aberdeen, S. Dak.
Sister M. Matilda	St. Joseph's Hospital	Mitchell, S. Dak.
Sister M. R. McCormick	McKennan Hospital	Sioux Falls, S. Dak.
Skinner, Marjory M.	St. Joseph's Hospital	Deadwood, S. Dak.

TENNESSEE

Arnold, Grace G.	904 Medical Arts Bldg.	Nashville, Tenn.
Bryant, Nettie M.	c/o Drs. Lewis & Lewis	Memphis, Tenn.
Caldwell, Bessie	Takoma Hospital & San.	Greeneville, Tenn.
Crabtree, Willie C.	c/o Dr. Geo. C. Williamson	Columbia, Tenn.
Elam, Mrs. A. C., Jr.	7 North Claybrook, Apt 7	Memphis, Tenn.
Estes, Mary L.	Children's Hospital	Chattanooga, Tenn.
Fink, Jewelle C.	1418 Madison	Memphis, Tenn.
Hemsley, Ada	Methodist Hospital	Memphis, Tenn.
Houser, Jennie*	Memphis General Hospital	Memphis, Tenn.
Little, Alice	Methodist Hospital	Memphis, Tenn.
Morgan, Velma M.	Rutherford Hospital	Murfreesboro, Tenn.
O'Brien, Jean**	869 Madison Ave.	Memphis, Tenn.
Skinner, Mary G.	Baptist Memorial Hospital	Memphis, Tenn.
Srock, Mary R.	St. Thomas Hospital	Nashville, Tenn.
Troster, Gertrude A.	654 Stonewall Place	Memphis, Tenn.
Vickers, Hattie	Vanderbilt Univ'sity Hospital	Nashville, Tenn.
Williams, Rubye A.	St. Thomas Hospital	Nashville, Tenn.

TEXAS

Armstrong, Jessie	Adams Hospital	Kilgore, Texas
Beck, Osa	Medical & Surgical Clinic	San Angelo, Tex.
Brockman, Bessie M.	St. Paul's Hospital	Dallas, Tex.
Buckner Margaret M.	Coffey Clinic	Fort Worth, Tex.
Cable, Marcella A.	Hermon Hospital	Houston, Tex.
Campbell, Allie M.	W. I. Cook Memorial Hospital	Fort Worth, Tex.
Crisman, Elvie M.	John Sealy Hospital	Galveston, Tex.
DeLay, Martha	Sanitarium of Paris	Paris, Tex.
DeVet, Friedah M.	1411 San Antonio St.	Austin, Tex.
Drucke, Cliffie B.	Waxahachie Sanitarium	Waxahachie, Tex.
Dumas, Frances E.	Graham Hospital	Graham, Tex.
Gay, Reva	Methodist Hospital	Dallas, Tex.
Green, Alvaretta	All Saints Hospital	Fort Worth, Tex.
Hass, Minnie V.	Methodist Hospital	Fort Worth, Tex.
Harrist, Margaret E.	Lubbock Sanitarium	Lubbock, Tex.
Hoadley, Dorothy M.*	Methodist Hospital	Fort Worth, Tex.
King, Evelyn K.	Seton Infirmary	Austin, Tex.
Kirven, Sarah	Torbell Sanitarium	Marlin, Tex.
Knight, Sallie F.	Baylor University Hospital	Dallas, Tex.
McLeod, Catherine S.	McKinney City Hospital	McKinney, Tex.
Melton, Nell J.	Dallas Medical & Surg. Clinic	Dallas, Tex.
Mercer, Ora Lee**	207 Medical Arts Bldg.	Fort Worth, Tex.
Mills, Beatrice J.	St. Paul's Hospital	Dallas, Tex.

Motes, Gertrude E.	234 West Beauregard St.	San Angelo, Tex.
Olmstead, Ola	Coffey Clinic	Fort Worth, Tex.
Rape, Vergie E.	W. Texas Baptist Sanitarium	Abilene, Tex.
Richardson, Grace	2624 Greene Ave.	Fort Worth, Tex.
Riek, Lucia L.	St. Paul's Hospital	Dallas, Tex.
Roemmele, Rena F.	Parkland Hospital	Dallas, Tex.
Schriver, Lucille M.	Sweetwater Sanitarium	Sweetwater, Tex.
Smith, Gertrude	208 Medical Arts Bldg.	Fort Worth, Tex.
Strange, Beulah	Baylor Hospital	Dallas, Tex.
Taylor, Mrs. Wilmoth B.	P. & S. Hospital	Corsicana, Tex.
Thompson, Florence	3116 Live Oak St.	Dallas, Tex.
Thomson, Margaret C.	2201 Welborn St.	Dallas, Tex.
Thompson, Velma G.	Baylor University Hospital	Dallas, Tex.
Ulack, Otelia	Methodist Hospital	Dallas, Tex.
Vaughan, Mary J.	Memorial Hospital	Houston, Tex.
Warren, Grace	704 Highland Ave.	Houston, Tex.
Webb, Alma	Camp and Camp Hospital	Pecos, Tex.
Wessinger, Ione	Box 323	Bryan, Tex.

UTAH

Bigler, Asenath	L. D. S. Hospital	Salt Lake City, Utah
Garrison, Mayme C.	Latter Day Saints Hospital	Salt Lake City, Utah
Hood, Gladys	L. D. S. Hospital	Salt Lake City, Utah
Mulvane, Lucile	L. D. S. Hospital	Salt Lake City, Utah

VERMONT

Sullivan, Laura R.	22 Edwards St.	St. Albans, Vt.

VIRGINIA

Addleman, Ollie M.	Cabaniss Hall	Richmond, Va.
Beal, Edna Nesbit**	Cabaniss Hall	Richmond, Va.
Copeland, Vera G.	St. Elizabeth's Hospital	Richmond, Va.
Doss, Ida Marie		Penn Hook, Va.
Farrell, Agnes M.	St. Luke's Hospital	Richmond, Va.
Felgendrager, Rosena J.	Memorial Hospital	Danville, Va.
Godbey, C. Virginia	Norfolk Protestant Hospital	Norfolk, Va.
Hall, Esther H.	Protestant Hospital	Norfolk, Va.
Lisle, Lorene	Stuart Circle Hospital	Richmond, Va.
MacGregor, Elizabeth N.	Alexandria Hospital	Alexandria, Va.
Medlin, Addie F.	Protestant Hospital	Norfolk, Va.
Ogle, Cora Lee		Barren Springs, Va.
Scott, Georgia C.	Lewis-Gale Hospital	Roanoke, Va.
Supinger, Virginia C.	Riverside Hospital	Newport, News, Va.
Weick, Anna M.	U. S. Marine Hospital	Norfolk, Va.

WASHINGTON

Barton, Rose C.	Aberdeen General Hospital	Aberdeen, Wash.
Butler, Mae D.	Sacred Heart Hospital	Spokane, Wash.
Chapman, Sylvia M.	Tacoma General Hospital	Tacoma, Wash.
Claude, Alice M.	610 East 26th Ave.	Spokane, Wash.
Cookson, M. Frances	N. 2727 Crestline St.	Spokane, Wash.
Downing, Ruth	St. Luke's General Hospital	Bellingham, Wash.
Ellstrom, Edith	General Hospital	Everett, Wash.
Espe, Ida L.	Swedish Hospital	Seattle, Wash.
Fish, Isabelle	Orthopedic Hospital	Seattle, Wash.
Gill, Edyth M.	Pierce County Hospital	Tacoma, Wash.
Koski, Elsa A.	Tacoma General Hospital	Tacoma, Wash.
Layton, Marguerite	So. 702 Lake St.	Colfax, Wash.
Leonard, Mary E.	Paulsen M. & D. Hospital	Spokane, Wash.
McCrumb, Sue W.	St. Luke's Hospital	Spokane, Wash.

O'Neil, Charlotte V.	Paulsen M. & D. Hospital	Spokane, Wash.
Quin, Beatrice M.	Station Hospital	Ft. Lewis, Wash.
Roberts, June C.	Sacred Heart Hospital	Spokane, Wash.
Scully, Elizabeth A.	Deaconess Hospital	Spokane, Wash.
Slayton, Marion	Tacoma General Hospital	Tacoma, Wash.
Sister F. Thibodeau	Sacred Heart Hospital	Spokane, Wash.
Tramm, Mary E.	Deaconess Hospital	Spokane, Wash.
Trapp, Clara M.	Sacred Heart Hospital	Spokane, Wash.
Wigen, Ragna P.	Deaconess Hospital	Wenatchee, Wash.

WEST VIRGINIA

Derwal, Lillian I.	General Delivery	Charleston, W. Va.
Ebandjieff, Evelyn G.	Grace Hospital	Welch, W. Va.
Reed, Pearl F.		Beaver, W. Va.
Russell, Mary M.	Charleston General Hospital	Charleston, W. Va.
Weisman, Rose Semer		Parsons, W. Va.

WISCONSIN

Baumgartner, Lottie M.	1821 W. Wisconsin Ave.	Milwaukee, Wis.
Beckman, Helena M.	St. Mary's Hospital	Superior, Wis.
Bridenhagen, Leona	Bellin Memorial Hospital	Green Bay, Wis.
Campbell, Julia I.	1300 W. Highland Ave.	Milwaukee, Wis.
Donovan, Mary	Milwaukee Co. Gen'l Hospital	Milwaukee, Wis.
Esval, Sigrid	Luther Hospital	Eau Claire, Wis.
Finnerty, Sadie E.***	520 N. Center St.	Appleton, Wis.
Hurff, Evelyn	County Hospital	Wauwatosa, Wis.
Jahn, Julia C.	4315 W. Lisbon Ave.	Milwaukee, Wis.
Kraft, Marie	Methodist Hospital	Madison, Wis.
Lamping, Clare	St. Luke's Hospital	Milwaukee, Wis.
La Valla, Margaret	Luther Hospital	Eau Claire, Wis.
McGinley, Edith	Sheboygan Memorial Hospital	Sheboygan, Wis.
Magnin, Martha M.	Deaconess Hospital	Milwaukee, Wis.
Maki, Saima M.	5000 W. Chambers St.	Milwaukee, Wis.
Moloso, Leapha E.	Misericordia Hospital	Milwaukee, Wis.
Neal, Laura V.		Seymour, Wis.
Phillips, M. Louise	St. Mary's Hospital	Madison, Wis.
Price, Louise A.	St. Vincent's Hospital	Green Bay, Wis.
Ries, Anna J.	St. Mary's Hospital	Rhinelander, Wis.
Rupert, Cecile B.	St. Luke's Hospital	Milwaukee, Wis.
Sister M. A. Gerber***	Mercy Hospital	Oshkosh, Wis.
Sister M. Bernadette	St. Joseph's Hospital	Milwaukee, Wis.
Sister M. Jeanne Mays	St. Francis Hospital	LaCrosse, Wis.
Sister St. Henry	Misericordia Hospital	Milwaukee, Wis.
Sister M. M. Francken	St. Elizabeth Hospital	Appleton, Wis.
Sister M. T. Henel	St. Mary's Hospital	Wausau, Wis.
Sauer, Olga E.	Milwaukee Hospital	Milwaukee, Wis.
Schwarting, Louise	Madison General Hospital	Madison, Wis.
Sedwick, Gertrude	Shawano Municipal Hospital	Shawano, Wis.
Smith, Lucille H.	Evan. Deaconess Hospital	Milwaukee, Wis.
Stranz, Violet L.	St. Joseph's Hospital	Milwaukee, Wis.
Thielen, Leone A.	St. Joseph's Hospital	Milwaukee, Wis.
Ulbricht, Edna L.	St. Mary's Hospital	Madison, Wis.
Voller, Elizabeth M.	St. Elizabeth Hospital	Appleton, Wis.

CANADA

Sinclair, Jennie M.	Chipman Memorial Hospital	St. Stephen, N. B.

FOREIGN

Black, Minnie M.	Philippine Dept. U. S. Army	Manila, P. I.
Flewwelling, Isabelle M.	American Compound	Tientsin, China
Gordon, Mabel	Pahala Plantation Hospital	Pahala, Hawaii
McElroy, Mary J.	American Hospital	Paris, France
Stauffer, Lerlene V.	Nurses' Quarters	Ancon, Canal Zone
Wetzel, Grace	c/o Standard Oil Co. of N. J.	San Nicholaas, Aruba, West Indies
Yarnall, Catherine E.	U. S. Army Nursing Corps	Washington, D. C.

MISSISSIPPI ORGANIZATION MEETING

At a meeting held in Greenville, Miss., on May 4th, 1936, the following officers were elected:

President
Emma Easterling
Vicksburg Clinic, Vicksburg, Miss.

First Vice-President
Irene Mason
Greenville, Miss.

Second Vice-President
Mrs. Sam Owens
Electric Mills, Miss.

Secretary-Treasurer
Lola Allen
Box 390, Greenville, Mass.

Trustees—2 years
Ann Sanders
Houston, Miss.

1 year
Lucile Mullen
Brookhaven, Miss.

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FOR 3, 4 or 5 GASES INCLUDING CYCLOPROPANE

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Presenting Exclusive Features of

Convenience, Unexcelled Performance and Beauty of Design. The Ultimate in Cabinet Equipped Anesthesia Gas Apparatus.

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MANY EMINENT AUTHORITIES have stated as their opinion that convulsions during anesthesia are caused by impurities in the ether. Walton ("A Note on Ether Convulsions")—British Med. Journal and Wilson ("Ether Convulsions")—Lancet, state that acetaldehyde, peroxide or ethyl sulphide, if present to the extent of 0.5%, are toxic, and have, in their experience, caused convulsions.

*

THERE IS NO ARGUMENT that can prevail against the opinion of all recognized authorities that purity in ether for anesthesia is of paramount importance.

*

TO REMAIN PURE for hours after the container is opened, ether must be rigorously free from impurities when packed. The standard limit for aldehyde in ether is 0.05%, and the limit for peroxide 0.001%.

*

HOWEVER, if ether which contains these impurities to the permitted limit is exposed to air, peroxidation rapidly progresses to the danger point.

*

THE SAFE COURSE in the purchase of ether for anesthesia is to buy only ether that is completely free from impurities when packed, and to buy it only in hermetically sealed containers in sizes suited to the needs of the purchaser during a reasonably short period after the container is opened.

*

MALLINCKRODT ETHER for Anesthesia (White Label) is produced with every technical safeguard that 68 years of manufacturing experience has dictated, from the selection of the base materials, throughout the process, to the supersensitive special tests.

*

TO PASS THESE TESTS every container of Mallinckrodt Ether for Anesthesia must be entirely free from aldehydes, peroxides and all toxic impurities.

*

MALLINCKRODT ETHER for Anesthesia (White Label) is packed in chemically treated containers, hermetically sealed with the patented solderless closure.

*

IT IS RECOMMENDED that it be purchased in containers of sizes to supply the operating room over a twenty-four-hour period, and that the sealed container be opened only in the operating room.

Container Sizes are ¼ lb., ½ lb., 1 lb., and 5 lb.

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